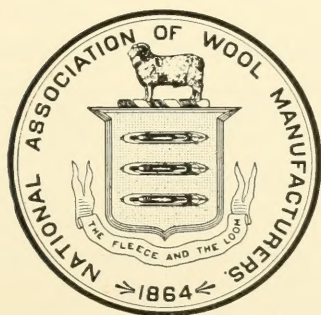


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BULLETIN
OF THE
NATIONAL ASSOCIATION
OF WOOL MANUFACTURERS
1923



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Assisted by

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BULLETIN
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VOL. LIII.]

BOSTON, JANUARY 1923.

[No. 1.

THE FORDNEY-McCUMBER TARIFF BILL.

AT this writing some six weeks have elapsed since the President signed the Fordney-McCumber Bill, and the Tariff Act of 1922 became a law. Although that period is by no means a long one, measured by the length of time that a protective tariff usually remains upon the statute books; nor perhaps a wholly representative one, in view of the fact that all of the duties and provisions have not as yet, and could not as yet, become fully operative; it has, nevertheless, been a sufficient time to permit of a fairly accurate measurement of the law, and, being a period of really remarkable activities in importations, it has afforded unusual opportunities for studying the general effectiveness of the bill, not only as to its interpretation of the *protective principle*, but also as to its productiveness of Federal revenue, which is directly affected by the character and degree of the law's *restrictive influence* upon kinds, quantities, and value of imports.

It would seem appropriate, therefore, to now attempt some general review of the Act as a whole; to analyze some of its more essential features—especially those which are of chief interest to the members of the National Association of Wool Manufacturers; and, in passing, to comment briefly upon some other aspects of the bill, without which it would have been a more acceptable and enduring protective measure, but even containing which, it offers far more for commendation than for criticism.

AN IMPROVEMENT FOR THE PROTECTION OF DOMESTIC
LABOR AND INDUSTRIES.

It is, of course, true that from whatever point of view it may be judged, the new Tariff Act is by no means a perfect piece of legislation. No informed person harbored the hope, much less the expectation, that under the conditions it would or could be. A voluminous measure dealing with so many different subjects, and each in so many varying aspects, which is the composite product of so many minds, must inevitably have many imperfections and perhaps some rather obvious inconsistencies. Serious errors, conflicting provisions, and ambiguous phraseology, all tending to create doubt and uncertainty as to just what certain parts of the law do mean, are bound to be found in complex enactments framed under such conditions. This is by no means peculiar to tariff legislation, nor is it limited to the measures of either political party. It is a condition which arises from our methods of lawmaking, and for which allowance must be made. In greater or lesser degree it is encountered in all legislation that is general in character, or at all comprehensive in scope.

But notwithstanding defects of a character common to former tariff enactments—defects which will involve some injustice to particular industries, and which will require, as have former acts, much litigation and judicial interpretation to determine the meaning of new and ambiguous phraseology—the Fordney-McCumber Bill is probably a distinctive improvement upon its predecessors as a measure for the protection of domestic labor and industries, and also as a producer of revenue for the Federal Government. This expression of a general judgment is not, however, to be understood as a blanket approval of the law. It is not to be considered as an endorsement of particular features which ought not to have been incorporated in the act in the form in which they appear, if at all. Commendation is deserved and accorded *in spite of these defects*, not because of them.

CONDITIONS WERE CONFUSED, INVOLVED AND UNSTABLE.

The Fordney-McCumber Bill was an unprecedentedly long

time in the making. It would not be proper to attribute this wholly to the activities of the opponents of protection. Many causes contributed to make much of the delay unavoidable, although there is nothing whatever to be said in defense of the senseless waste of time that was indulged by the Senate while many members thereof repeated, day after day, discussions and arguments not pertinent to the questions at issue. Upon the other hand, in the actual making of the Bill, first by the Committee on Ways and Means of the House, and later as very materially altered and amended by the Finance Committee of the Senate, the very conditions which it was purposed to adjust by the revision were found to be so confused, involved and unstable, that it was a matter of the greatest difficulty to attain general agreement upon rates of duty which would fairly approximate protection of American labor and industries, *not under the existing abnormal conditions*, but within a reasonable length of time, when something approaching normality may be expected to be restored.

Opposition was perhaps no greater than that arrayed against former protective enactments, although the opposition included some new groups; but these were completely counterbalanced by support from sections formerly antagonistic to the policy of tariff for protection. Some prominent bankers, formerly aligned with the party of protection, objected to the enactment of protective rates at this time, and various reasons were advanced in support of the objection. One group alleged that in the unsettled economic conditions prevailing in Europe it would be impossible to determine what rates were necessary, while another faction advanced the plea that an increase in customs rates would, by curtailing imports, deprive debtor nations of the means of liquidating their indebtedness to the United States through the sale of great quantities of their products here.

TARIFF ENACTED TO AVOID DISASTER TO AMERICAN INDUSTRY.

These objections already have been so fully discussed—and even in the brief period that has elapsed since the enactment of the new law have been so completely refuted by the facts—that any particular consideration of them here is quite

unnecessary. The first objection is very much the same as to say that it is a mistake to extinguish an incipient fire in a building until there has been time to thoroughly investigate its contents and ascertain the kind and quantity of combustible commodities, so that an exact computation can be made as to the quantity of water that will be required to put out the fire and prevent a disastrous conflagration. Idiotic as such a procedure would be, it is hardly more so than the objection just quoted, especially when it is remembered that *it was precisely because of the unsettled financial and economic conditions in Europe, and the extraordinary advantages which those conditions gave to European products entering the American market, that a prompt revision of the tariff was necessary, in order to avoid disaster to American industries.*

As for the apprehension that our foreign debtors would not be able to meet their obligations to us if protective tariff rates are applied on imports, that is merely ancient free-trade doctrine which has been disproved by actual experience under every protective tariff law that we have had, *and is being disproved now by actual experience under the operation of the Fordney-McCumber Bill.*

IMPORT RECEIPTS EXCEED FIRST MONTH RECORD OF PROTECTIVE TARIFFS.

In support of that part of the foregoing statement which refers to the present law, it is sufficient to refer to some recent remarks of Mr. Ernest W. Camp, Chief of the Customs Division of the Treasury Department, who, in discussing the fact that the customs receipts for October, the first full month of operation of the new tariff act, amounted to \$40,000,000., was quoted in the newspapers of November 3rd as having said:

Customs receipts were \$40,000,000 in the month preceding passage of the Emergency Tariff, in 1921, and they exceeded that figure in the month preceding the passage of the Tariff Act of 1922, due to the rush of imports before enactment of that measure; but never before has that figure been reached in the month following the passage of a protective tariff act. This is evidence that the new tariff law is anything but prohibitive.

Official statistics that were quoted during the Congressional debates showed that substantial increases in our international trade followed the enactment of the McKinley, the Dingley, and the Payne-Aldrich acts; but as Mr. Camp has set forth, the enactment of none of those measures inaugurated such an international trade in dutiable goods as we have accepted from foreign nations, chiefly of Europe, since the passage of the Fordney-McCumber Bill. As protectionists have pointed out time and again, substantiating their statements with statistics, the great defect in the argument that protective rates injure international trade, is that those who advance such an argument wholly overlook (1) that the industrial prosperity of the United States creates increased demands for many kinds of imports, and (2) that exports and imports between any two countries do not have to balance each other, any more than the exchanges between two domestic banks have to balance. As in the case of banks, where debit and credit balances are adjusted in the combined clearings of all banks, so the balances of international trade are settled in the *international clearings* of all international trade; which means that what we owe to countries to which we are habitually debtor, is settled by what is owed us by countries to which we are habitually creditor.

HOSTILITY TO PROTECTIVE REVISION BECAUSE OF HIGH PRICES.

There was also somewhat more than the usual hostility to a *protective* revision of the tariff upon the part of domestic distributors, both wholesale and retail. As a class they had suffered much, and sometimes unjust, public criticism because prevailing prices for all kinds of commodities have remained considerably higher than they were before the war, and many of them took the untenable position that all dutiable goods, the domestic equivalent as well as the foreign, would be enhanced by the full amount of the duty and that they would have to meet the same resentment which would be aroused. Opposition from this source upon such grounds naturally invited comparisons between producers' prices and the prices charged to consumers, which disclosed differences so great that it was instantly obvious that even if producers' prices were

enhanced by the full amount of the duty (which is seldom the case), the amount of the enhancement would be trivial as compared with the great margin of mark-up by wholesale and retail distributors for profit and cost of distribution.

We have not been of those who charged the distributing agencies with gross profiteering. On the contrary, we believe that the actual *net* profits of the wholesale and retail trade in general have not been excessive. But it cannot be disputed that their *costs of distribution* have been enormously increased in recent years in many ways that are susceptible of reformation; and we believe that in sensible retrenchment along those lines lies the remedy against the sort of criticism to which they have been subjected in the recent past, and not by espousing an economic policy that would greatly decrease the purchasing power of most of the consumers of the goods which they have to sell.

In addition to the kinds of opposition already mentioned, there was strenuous antagonism from certain formerly protectionist newspapers. We mention this opposition directly after reference to that by wholesalers and retailers, in the sequence of *cause* and *effect*. It is needless to go further than that into an analysis of the motive actuating these opponents. Some of them made very vicious and wholly unjustified statements, and gave utterance to the direst predictions of what would happen if the proposed law were enacted; but not one of them offered a single *constructive* criticism, or anything in substantiation of the statements they made, although publicly invited so to do by the Chairman of the Senate Finance Committee. As to the character and merit of the opposition advanced by these newspapers, it is sufficient to say that they now find themselves called upon to print *as news* the most complete and conclusive refutations of what *editorially* they predicted as inevitable only a few weeks ago.

There was another "last resort" kind of argument that was advanced by practically all of these opponents of a protective revision, and that was that foreign nations would be increasing their own tariffs against imports from this country. Unfortunately for them, this sort of reasoning appealed only to those who uttered it, for they entirely overlooked the fact that the "retaliation" had been in advance, that practically

every nation of any considerable commercial importance had established substantial protective tariffs long before the Fordney-McCumber Bill was well under way, and that the United States was practically the last of the great countries to take effective steps to protect domestic labor and industries.

SUPPORT OF PROTECTIVE REVISION FROM NEW QUARTERS.

As already has been stated, the activities of all these groups were more than offset by accessions to the support of a *protective* revision of the tariff, from quarters formerly hostile to protection. This shift of sentiment was not restricted to any one part of the country, but was most evident in sections which heretofore have been of strong free-trade tendencies; and it had its most significant illustrations in the active interest shown by many Democratic members of Congress in protective rates upon competitive commodities produced in their own states.

Those opponents of the revision who attempted to carry water on both shoulders by describing themselves as "protectionists in principle," and who then opposed the rates of duty that were shown to be necessary to effectuate protection, entirely failed to realize that so far as concerned the industries of this country, the law which has just been superseded was designed for revenue only, and was avowed by its authors to provide no intentional protection; and that subsequent to its enactment our domestic industries were accidentally protected by the war, which not only interrupted exports from foreign countries to the United States, but created an artificial demand for the products of American labor—in fact for a time made the United States the chief producer for the entire world, virtually without any great competition. After the war some little time was required for the demobilization of armies and the resumption of the production of peace-time supplies. Not until 1921 did ~~this~~ transition reach a stage where ~~foreign~~ competition began generally to menace domestic production. That it would, in the absence of protection, have progressively increased to the point of disaster, can only be doubted by those who are uninformed of the facts, or who are determined to deliberately disregard them.

PROVISIONS NEW TO TARIFF LEGISLATION—THE ELASTIC
CLAUSE.

The new tariff law introduces several marked changes, from preceding enactments, chief among which are the so-called *elastic clause* (Section 315 of the Bill), and a provision which for the first time permits domestic industries to become participants in proceedings to establish and apply the proper duty classification to imported merchandise.

The first-mentioned innovation, while undoubtedly excellent in its purpose, is in the nature of a compromise with the opponents of protection, although of course not so expressed by the President, who, if not the originator of the idea, was at any rate the official sponsor for the proposal. For the purpose of giving to the tariff enactment an elasticity which will permit changes in the rates when and to the extent necessary to adjust the differences between foreign and domestic production costs, the new law provides that the President may, after investigation by the Tariff Commission, increase or decrease any rate of duty in a sum not to exceed 50 per cent of the rate established in the law itself (except upon coal tar products), and, if this does not meet the requirements of the situation, the established rate may be changed to apply to the domestic, instead of the foreign, valuation.

This new provision in the law has strongly appealed to many, and has been given their enthusiastic approval. The unfortunate thing about many pieces of important legislation is that it does things, or opens the way to the doing of things, not contemplated in the original intent. There is strong likelihood of this being the case with Section 315 of the new tariff bill. For, entirely aside from the important question of whether or not Congress has the constitutional authority thus to transfer to the executive branch of the Government virtual legislative powers specifically vested in the Congress itself, the provision is subject to several objections, the importance of which ought not to be minimized. It is true, of course, that the unprecedented authority extended to the President is restricted to certain defined limits, but the latitude is so wide that in actual fact the Chief Executive is vested with very broad powers to legislate tariff rates

materially different from those established by Congress, and thus is authorized to substantially modify the customs taxation.

CONSTANT BUSINESS UNCERTAINTY.

Wholly apart from these considerations, the provision is bound to cause almost constant business uncertainty, alike to domestic industries and to importers. For domestic producers are subjected to the menace that at any time, upon official proclamation which need not cover a longer period than sixty days, their rates may be brought below the line of effective protection; while importers are faced with the possibility of increases of duty in such sums as may entirely change the aspect of then existing contracts, perhaps not only eliminating all of the prospective profit, but imposing an actual loss.

Further than that, this section of the Fordney-McCumber Bill imposes upon the President burdens so vast and exacting that even to attempt to fulfill the obligations would require an almost total abandonment of all the other great responsibilities of the presidential office; while the only alternative is to delegate the work to others (such as seems to be the present plan), while retaining the responsibility, which is established by law and therefore cannot be shifted. It is clear, therefore, that the President has been given a virtual legislative power which he himself cannot exercise, but can use only by proxy. This very condition—and entirely without either the connivance or the knowledge of the President or the members of the Tariff Commission—will make it that much easier for those who desire to do so to use this provision of the tariff enactment as a very unfair, but very effective, means of procuring party campaign contributions, by the implication of an ability to influence an increase or decrease in established rates, or to maintain them undisturbed. It is not difficult to foresee that the campaign managers of both great political parties would make profitable use of implied threats or promises respecting this constant uncertainty and instability of tariff rates, even though they themselves might know, and those solicited might fairly assume, that the said campaign managers would have nothing whatever to do with the matter.

With this sword of Damocles hanging constantly over domestic industries and importers alike, each would be under a pressure to meet such demands, no matter how unjust they might be.

THE WOOL SCHEDULE.

In the Schedule Eleven the most important change over preceding acts is the method of applying the duty on raw wools, other than those of the carpet class. Instead of a basic specific duty on the wool in its natural condition (greasy wool), with multiples of that rate for wools imported in the washed or scoured state, which was the method of all the protective tariff laws of the last half century, the new act imposes a specific rate on the clean content—that is, upon the amount of clean wool that will remain after the grease, dirt and other impurities have been removed. If all clean wool was of even approximately similar value, this would be satisfactory and just. Owing, however, to the great variations in the character, the utility and the value of different wools, a single specific rate on the clean content results in greater disparities between the value of the wool and the amount of duty thereon—*i. e.* the *ad valorem* equivalents—than was the case under the old method. The practical effect of this clean content duty will probably be to exclude from importation the coarser and cheaper varieties of clothing and combing wools. The Association, while advocating ample protection for the domestic wool-growing industry, has not approved this method of providing it, and it is believed that in the end this change will prove to have been a serious mistake and a detriment to the American wool growers, as well as to the wool manufacturing industry.

The paragraph relating to carpet wools evidences the careless haste in which the final stages of revision were completed. The Bill (Paragraph 1101) provides that these coarse wools may be brought in under a duty of 12 cents per pound when in the grease; 18 cents per pound, washed; and 24 cents per pound, scoured. It is clearly specified, however, that a bond may be filed, and that if, within a period of three years, satisfactory proof is given that the wool was used in the manufacture of floor coverings, the duties shall be remitted or refunded.

Thus far the intent is clear and the purpose sound. But by a further inexplicable provision, such wools, when imported before their ultimate use is known, shall pay the originally prescribed duties, and then shall be subject to an *additional* or *penalty* duty of 20 cents per pound, if not used for carpets or rugs. Therefore, according to this proviso, the wool merchant who imports certain classes of wools which are equally suitable for floor coverings or for other purposes, may follow either of two courses:

- (1) He may pay the prescribed duties and file no bond, and thereafter use or sell the wool for any purpose; but obtain no rebate, even though the wool *is* used for the manufacture of floor coverings.
- (2) He may pay the prescribed duties, but file a bond; in which case, if within a period of three years he can show that the wool was used in floor coverings, he may obtain a rebate or refund of the whole duty.

But if he follows this course, and does not show that the wool was used for floor coverings, he must pay (in addition to the duty he already has paid) a penalty rate of 20 cents per pound.

In other words, if he knows at the time of importation that the wool is to be sold and used for floor coverings, he may pay the prescribed duty of 12 cents, 18 cents or 24 cents per pound (according as whether the wool is in the grease, is washed, or is scoured), file his bond, and, upon proof of such use, at any time within a period of three years, get a full remission or return of the duty he has paid. If he knows that it is to be used in the manufacture of cloth, he may pay the prescribed duty, and his dealings with the Government, so far as that importation is concerned, are concluded. But if he does not know in advance to whom he is going to sell it, or for what purpose the wool ultimately may be used, he must still pay the prescribed duties, and, if it is then used for cloth, must in addition pay a duty of 20 cents per pound.

Why the identical wool, imported for identical use, should in the one instance be dutiable at 12 cents per pound (in the grease), and in another instance at 32 cents per pound, is past understanding. Obviously it is not because of any contemplated irregularity, for the paragraph designedly permits

importations for either purpose—without duty (that is, with an eventual refund) when for the one use, and subject to the prescribed duties *when known* to be for the other use. It also provides for importation when it is not yet known for which purpose the wool is to be used; *but in the latter case imposes a penalty duty of an additional 20 cents per pound if employed for exactly the same purpose which, WHEN KNOWN, calls for only the originally prescribed duty of 12 cents, 18 cents or 24 cents per pound (according to the state in which the wool is imported).*

Recently it has been intimated that the Treasury Department intends to get an approximation of consistency, although not of equity, under this paragraph, by requiring that a bond be filed for every importation of carpet wool, so that in every case in which the wool is not used for the manufacture of floor coverings, the penalty duty will be imposed. If that course is followed, the importer would not have the alternative previously noted; but it is somewhat difficult to see how the importer who tenders payment of the primary duty (12 cents, 18 cents or 24 cents per pound, according to the state of the wool), without filing the bond, can be denied the right to enter his wool *without further obligation or liability*.

Even under such an interpretation of the paragraph as the Treasury Department is understood to favor, there would still be the anomalous result that low price coarse carpet wools, when used for other than carpet purposes, would pay a duty per clean pound of 24 cents plus 20 cents, or 44 cents, while finer and higher priced wools for the same manufacturing purposes would pay 31 cents per clean pound.

ERRORS IN THE WOOL SCHEDULE.

In this same Schedule 11 there are a number of errors which must be charged to sheer carelessness and neglect of easily available information. Typical of these are the following:

Both the House and the Senate adopted the scale of compensatory rates recommended by the Tariff Board, and in the Bill as originally passed by the House, as well as in the Senate amendments, the compensatory rates were based upon those

ratios. The change which the Conference Committee made in the raw wool duty, however, (31 cents instead of 33 cents per pound), necessitated corresponding changes in the compensatory rates. This involved nothing more than simple arithmetical computations, but in several instances the results are somewhat less than the ratios previously approved by both the House and the Senate.

In Paragraph 1109 as it was originally reported to the Senate, the *ad valorem* rate for values above \$1.50 per pound was 5 per cent more than the next lower bracket. By a Finance Committee amendment this was subsequently reduced to the same rate as that for the lower bracket. With this change the phraseology should have been altered so that one statement of rates for all values above 80 cents would have sufficed. Instead, merely the rate figure in the highest bracket was altered, with the result that two price groups are specified with identical rates. Unlike the other errors here mentioned, this one is unimportant, it being merely significant of the haste and carelessness with which the bill was finally completed.

A much more serious blunder is that by which traveling and automobile rugs are specifically *included* under the provisions of Paragraph 1111, instead of being either specifically *excluded* from these provisions, or else included in Paragraph 1109. In the prior tariff acts these articles were not mentioned by name, and the Customs officials properly classed them as cloths because they are not, in fact, blankets, and because, too, their cost of manufacture and finishing is as much as the cost of similar cloths, and considerably more than the conversion cost of blankets. But under the prior acts, importers contested the Government's classification, contending that these rugs or robes should be classed as blankets. When the issue was presented for judicial decision the Government's classification was not sustained, because of a lack of competent technical testimony. These facts were fully set forth during the public hearings held by the Committee on Ways and Means, and in the bill reported by the Committee there was an obvious, but clumsy, attempt to correct the defect in the Act of 1913. The *expert* who drafted the paragraph in the Ways and Means Committee's bill apparently undertook to carry out

the intent by so qualifying the blanket paragraph as to exclude such rugs, without specific mention; but the language as adopted by the House was so restrictive that it would have excluded most of the blankets to which the paragraph was intended to apply. The Finance Committee therefore had the paragraph redrafted in simpler terms. In this re-phrasing the necessity for specifically mentioning the rugs was apparently remembered, but neither the reasons nor the method, and evidently the testimony at the hearings was not consulted, *for the result is that the final draft exactly reverses the intended correction.* The insertion of the word *not* before the word "including" in this paragraph was the only change needed to effect the purpose; but although the attention of the conferees was directed to this, and to the other mistakes here cited, their work was completed with such precipitate haste that these very obviously needed corrections were neglected.

Among the recommendations made in the brief submitted to the Committee on Ways and Means upon behalf of the affiliated associations of the wool manufacturers, two of those that were adopted by the Committee were subsequently rejected by the Senate; and in the Conference the will of the Senate prevailed. These were embodied in Paragraphs 1110 and 1122 of the bill as passed by the House, the one relating to cloths that have been shrunk, or cut to garment lengths, before importation, and the other to samples imported in bulk for use in the resale in the United States of imported goods. The reasons given in support of these provisions were apparently convincing to the Committee on Ways and Means, and to the House. Their elimination by the Senate is reported to have been due to adverse advice given by a subordinate of the Customs Service, who was consulted upon matters concerning the administrative features of the bill. The opinion of this *expert*, as unofficially quoted, was evidently based upon a misapprehension of the facts. But, such opinions not having been given in public session, there was no opportunity to satisfy the doubt of practicability which thus had been created.

COMMITTEE EXPERTS CONSULTED IN EXECUTIVE SESSION.

As a matter of fact, it is both improper and unjust that

these so-called Committee experts (employees of the Customs Service, of the Tariff Commission, and of other branches of the Government), whose knowledge is expert only upon administrative practice, and upon the academic aspect of questions involved, and who are wholly without practical experience to enable them to speak authoritatively as to the industrial, commercial or technical facts, should be permitted to give their *expert* opinions only in the secret executive sessions of the Committees, without any opportunity being afforded to those having a competent knowledge of the subject to correct their misstatement of fact and errors of opinion. The same reasons which make it desirable that the testimony of others should be given in public hearings, and duly recorded, are equally applicable to these advisers, whose unchecked statements go to the Committee with a weight of authority to which they are not entitled, and which they would not acquire if publicly made, so that they could be subject to correction when probably wrong.

While the industry cannot but regret that the palpable errors and oversights here mentioned were not corrected, it seems, as already has been said, that such shortcomings are inevitable under our methods of drafting and amending revenue legislation. It also should be noted here that from tables already issued from the office of the Association, it will be apparent that the rates upon manufactures of wool are generally lower than in the previous protective tariff laws with which the present generation has been familiar, notwithstanding the increase in the actual raw wool duties.

AMERICAN VALUATION.

There is another aspect of the recent revision that is worthy of mention here, not as a part of the bill as adopted, but because it throws a significant light upon the importance and merit of much of that which comes under the characterization of general tariff discussion. Perhaps nothing in recent years has served to so forcefully bring to public attention the almost complete lack of information possessed, and the surprisingly loose and illogical thinking indulged in, by so-called "economists," on the subject of the tariff, as was afforded by the American Valuation discussions which marked the earlier con-

siderations of the tariff revision. The "reasoning" which was reflected in the strange opinions expressed, showed a mental confusion which would not be expected of a youth in the junior grades of high school. It is our present recollection that one group of opponents of protection gathered together and issued in the form of a public statement, a brief expression of "opinion" upon the American Valuation proposal by seventy such "economists"—many of them college and university professors—and that of the entire seventy, all but one confused the proposed method of *administering* the *ad valorem* rates, with the amounts of duty that would be derived from certain suggested rates applied under that method; and hence immediately reached the remarkable conclusion that assessing rates upon the domestic value or selling price would result in prohibitive duties. One "economist" out of seventy was able to distinguish between a proposed *method*, and certain recommendations that had been made for application by that *method*!

So far as the domestic woollen and worsted industries are concerned, they probably have more adequate protection under the present foreign valuation rates, even though those rates are somewhat lower than prevailed under preceding protective tariff enactments, than would have been the case under American Valuation, if the rates for application to domestic values had been arrived at by methods proposed in the Senate. For, the Senate first having written a bill whose rates were to be assessed upon the foreign values, it was suggested that if these rates were to be converted into American Valuation equivalents, domestic value should be assumed to consist of foreign cost plus certain fixed percentages for transportation, overhead, commission, profit, etc., wholly irrespective of whether or not some classes of goods are subject to such percentages of enhancement. In the case of the Wool Schedule, such conversions, by the formula proposed in the Finance Committee, would have assumed increases in cost which do not actually take place in putting foreign wools and worsteds into competition with domestic products in the American market, and hence the *ad valorem* rates that would have been computed upon such a *theoretical* American value, or selling price, would have produced amounts

of duty appreciably less than the duties contemplated by the original Senate rates, applied to foreign values.

Whether this proposal was advanced in complete sincerity, or merely as an effective means of discouraging further efforts to bring about the adoption of the American Valuation proposal, is, of course, a matter of conjecture; but it is certain that the above-described method of converting foreign valuation rates in their *supposed* American Valuation equivalents would have imposed grave injustices, and consequent heavy losses, upon the woolen and worsted industries of the United States.

Notwithstanding the defects to which we have referred, some of which are likely to have unfortunate consequences, Schedule 11 of the Tariff Act of 1922, measured in its entirety, contains much more to commend than to criticise; and is much better than might have been expected, in view of the conditions under which it was prepared and enacted.

D. W. F.

COSTS OF WOOLEN AND WORSTED MILLS BEFORE AND AFTER THE WAR.

BY S. B. LINCOLN

OF LOCKWOOD, GREENE & CO., ENGINEERS.

THE purpose of this article is to present a record of the cost variations of the last ten years as they apply to woolen and worsted plants, and to give some comparative costs. In the five year period beginning 1911 to the close of 1915 the cost of a mill to make a given class of goods was a pretty definite figure. It could be calculated in advance almost exactly, and once made up, an estimate was substantially as good a year later as it was on the day when made. But, toward the end of 1915, and near the first of the year 1916, prices became subject to sudden and violent advances, and these advances continued for the next five years.

At the start the increases were relatively small, and as the rise continued, they became larger and more frequent until the peak prices were reached during the middle of the year 1920, at which level prices were from three to four times as high as those which prevailed prior to 1915. During the whole five year period it became practically impossible to predict in advance with any degree of accuracy what a given project would cost. During the latter part of the boom period prices increased so rapidly that many projects cost at least 100 per cent more than their estimated cost, based on prices prevailing when the project was started. Nearly every manufacturer starting an expansion program during this period had the same experience, that of seeing the estimated cost of his program mount month after month, until the original estimate was left so far behind that it represented only a fraction of the money required. In the period since the middle of 1920, prices have come down considerably, but present tendencies are upward again, and it would be a brave man who would venture to assert that we have reached any such stabilized level as that which prevailed before the war.

PRESENT COSTS OF COMPLETE WOOLEN AND WORSTED MILLS.

It may be of interest in connection with this discussion to present some approximate figures on the cost of complete plants, at current prices, for various kinds of mills, assuming the purchase of electric power, and based on first-class construction and new equipment throughout. It is impossible to give more than very general figures since two mills are seldom alike in equipment or character of product.

1. WORSTED YARN MILL (BRADFORD SYSTEM)

Purchasing tops and making weaving or knitting yarns: \$65 to \$70 per spindle
(based on spinning spindles only)

2. WORSTED YARN MILL (BRADFORD SYSTEM)

But with addition of wool sorting, scouring, carding and combing: \$110 to \$115 per spindle

3. WORSTED YARN MILL (FRENCH SYSTEM)

Purchasing tops and making knitting yarns, without dyehouse: \$65 to \$70 per spindle
Including dyehouse and re-combing: \$70 to 75 per spindle

4. WOOLEN YARN MILL

To deliver yarn on cops or jack spools. \$40,000 to \$45,000

5. WORSTED WEAVING AND FINISHING PLANT

Buying all yarn and making piece dyed goods, based on all broad looms: \$4000 to \$5000 per loom

6. COMPLETE WORSTED MILL

Starting with raw wool and turning out fancy worsteds on broad looms: \$7500 to \$8500 per spindle

RELATIVE COST—BUILDINGS AND MACHINERY.

The division of the total cost of plants between buildings and machinery will vary somewhat with the kind of plant. In the case of a weaving and finishing plant the building cost is a greater proportion of the total than in the case of a worsted yarn mill. A good average figure for the woolen and worsted industry is 40 per cent for buildings and 60 per cent for machinery. In stating this figure, the term buildings is used to include site, all storage and manufacturing buildings and all building equipment, such as plumbing, heating, lighting, elevators, fire protection, process piping, etc. This figure is given for mills without power plants other than boilers for heating and furnishing steam used in manufacturing processes.

DIAGRAMS PRESENTED.

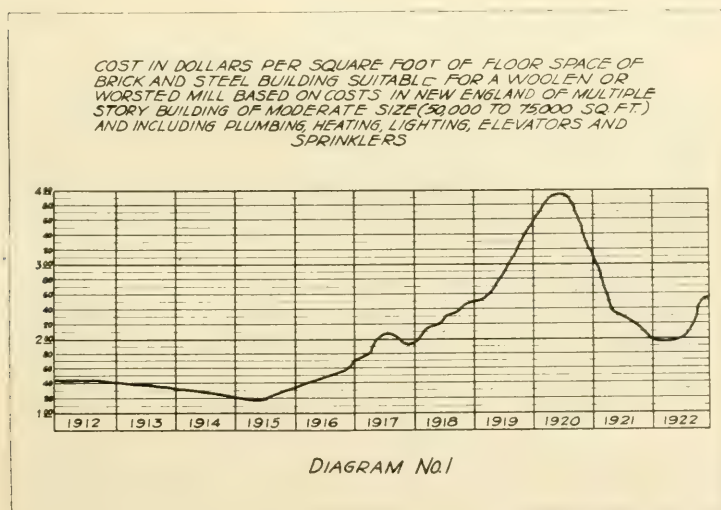
Herewith are presented some diagrams showing in detail the variations during the last ten years in building costs, and in prices of certain important items entering into the equipment of worsted and woolen mills. The items covered by these diagrams are those which make up more than two-thirds of the cost of the average worsted or woolen mill project, so that they may be used to show at a glance just when the price increases have taken place, and what reductions have been made since the peak prices were reached.

COST OF BUILDINGS—(DIAGRAM NO. 1).

In this diagram is presented the average cost in dollars per square foot of a building, such as is commonly used for a woolen or worsted mill. This is based on a brick building with steel floor beams. In the case of buildings with timber framing the costs would in general be slightly below those presented in this curve, and for reinforced concrete buildings with wood floors costs would in general be somewhat higher than this curve. In certain localities and in favorable conditions, and particularly in the case of large buildings, the cost of concrete buildings might come down practically to the figures given.

It will be seen by reference to this curve that the period representing the most rapid increase, and during which the

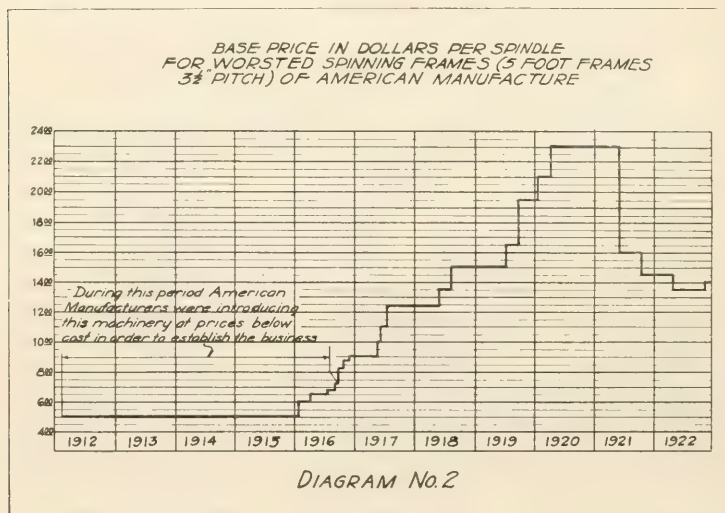
highest costs were reached was from the middle of the year 1919 to the middle of the year 1920. During this period extreme variations in the cost of buildings occurred in different localities. Labor strikes, inefficient workmen, freight embargoes, premiums for prompt delivery, and the great haste with which work was being pushed, all contributed their share toward increasing costs, so that in many instances, and in various localities, buildings were constructed which cost far more than the figures shown by this curve, and through no fault of anyone connected with them. It is true, however, that here and there, through some fortunate combination of circumstances, buildings were constructed during this period at the figures shown on this curve for this particular period, so that this portion of the curve has been allowed to stand in this position, even though a number of buildings reached costs far above those shown.



For the period preceding the height of the boom, and for the period since the middle of the year 1920, this curve represents very accurately the cost of a building of this type and has been checked up by comparison with many actual buildings. It will be seen that the low point was reached early in the year 1922 when there was a temporary slackening in build-

ing activities, with a consequent reduction in materials and labor and an increase in the efficiency of workmen. As the year progressed, the increase in volume of building stimulated material prices and resulted in increased wages to the building trades in most localities. There has recently been a scarcity of skilled workmen in building trades, with the result that the efficiency of building labor as a whole has not been as good as it was earlier in the year.

The combined result of these different factors has been a sharp increase in building costs during the latter part of the year 1922. Beginning about November first this rise seems to have been definitely halted, and at the present time the costs for buildings of this type stand at practically twice the low point reached during the latter part of 1914, and at something like 190 per cent of the average cost prevailing during the several years preceding that date.



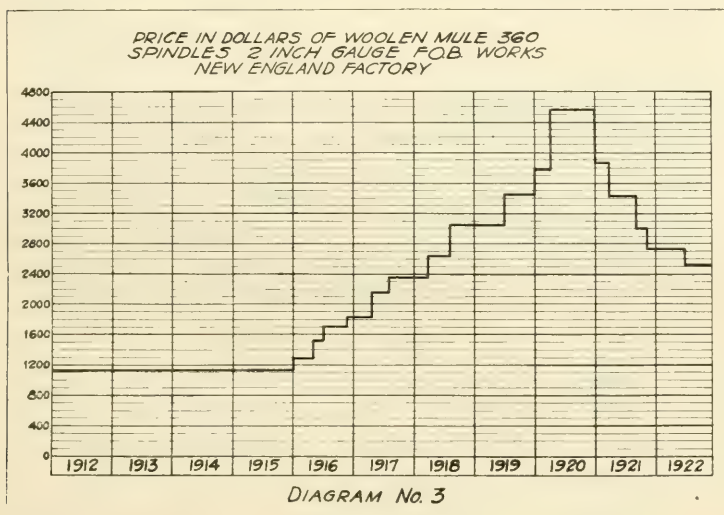
COST OF WORSTED SPINNING FRAMES—(DIAGRAM NO. 2).

Diagram Number 2 will be self-explanatory. Particular attention should be drawn to the fact that during the four years preceding January 1st, 1916, manufacturers of this machinery were selling it at a loss in order to establish the line, and during the same period prices of English machinery

were considerably higher than for that of American make. It is also of particular interest to note that in November of this year the base price of worsted spinning machinery was increased from \$13.50 to \$14.00 per spindle.

COST OF WOOLEN MILL MULES—(DIAGRAM NO. 3).

Diagram Number 3 is also very largely self-explanatory, and shows the same characteristics as for worsted spinning frames, having an absolutely level price for four or five years preceding January 1st, 1916. In fact, this tendency is common to almost all the machinery curves presented, and machinery manufacturers are practically unanimous in stating



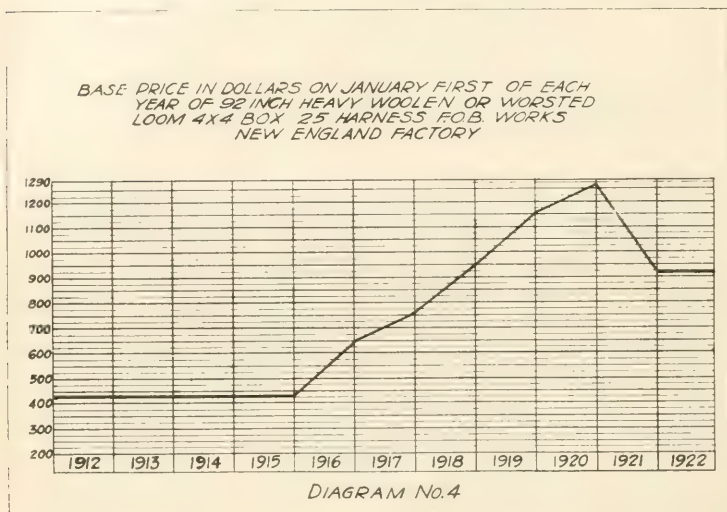
that during this period, which was one of considerable depression in the woolen and worsted industries, competition was such that their machinery was sold either without any profit or in many cases at a loss. They also state that during the latter part of this period, or beginning in 1914, their manufacturing costs began to increase so that by about the first of 1916, or at the time the first increases were announced, their costs had increased something like 25 per cent without any increase whatever in selling prices.

In connection with this diagram it is of interest to note that

the present price for mules stands at approximately twice the price prevailing during the four or five years previous to January 1st, 1916.

PRICES OF HEAVY WOOLEN AND WORSTED LOOMS
(DIAGRAM NO. 4).

This diagram is also very largely self-explanatory, although made up on a slightly different basis, as it shows the cost of a

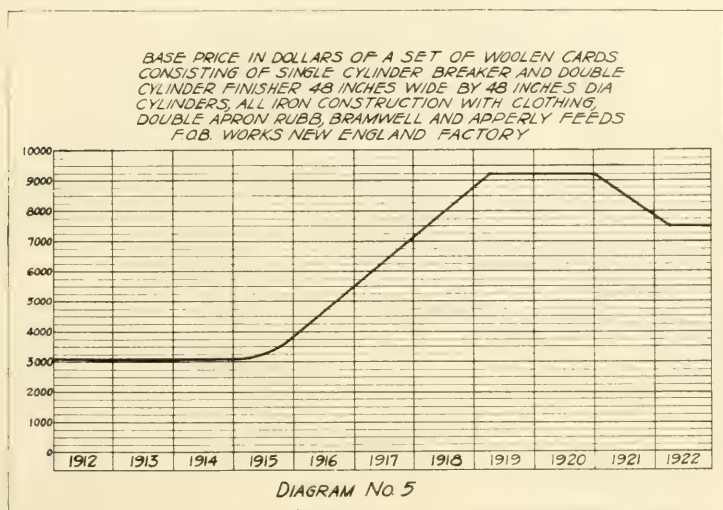


loom on January 1st of each year. In common with the other curves this shows the level price period preceding 1916, and the manufacturers state that during the latter part of this period looms were sold at or below cost in order to maintain this price. This curve again, as will be seen, shows striking similarity, not only to the other machinery curves, but also to the curves for costs of buildings, and also shows present prices at approximately twice the level of those prevailing from 1912 to 1916.

COSTS OF WOOLEN CARDS—(DIAGRAM NO. 5).

This diagram also speaks for itself, although made up on a slightly different basis from that of the diagrams for mules and spinning frames, since it does not in general show specific points at which price changes occurred. This curve has

practically the same characteristics as those of the other curves presented, hence in general the same statements apply to it as have been made for the other diagrams.



It should be stated here that in the case of nearly all textile machinery, material improvements in the design and manufacture have been made during the ten year period under consideration, so that even had there been no increases whatever in the price of materials and labor entering into these machines, costs today would still be higher, by reason of the improved product.

PRESENT PRICE TENDENCIES.

The present prices of buildings and their equipment, seem very firm. There is a good volume of building business. Labor in the building trade seems to be quite fully employed and at good wages. There is a sufficient volume of business in sight and contemplated to provide employment for many months to come. Only a small part of this building is made up of manufacturing plants or additions, and by far the larger portion is in building of homes, institutions, banks, office buildings, and similar structures.

The wages for the skilled trades in the building industry

are still very nearly up to the peak prices paid, although for common labor the rates are somewhat lower, and it is also true that in small towns, and for projects of moderate size where a large number of workmen do not have to be brought in from outside, wages are somewhat lower than in the larger cities.

The manufacturers of textile machinery are in general very busy and are sold well ahead. The worsted end of the industry seems at the moment to have more business than the woolen end, but in general all plants making woolen and worsted machinery are running full and have considerable business for the immediate future.

The wages paid by machinery manufacturers vary somewhat with individual plants, but in general have been reduced from 15 per cent to 22 per cent below the highest wages paid in 1920.

CONCLUSIONS.

It seems apparent on consideration of the foregoing that no immediate reductions of any magnitude may be looked for either in the cost of buildings and equipment, or in the cost of textile machinery.

It would also seem that if further reductions are to be made, they will have to come as a result of lower wages and of lower transportation costs. Naturally with lower wages and transportation costs, if these come, we shall see lower prices for materials, since these are in the long run, made up very largely of labor and transportation.

To make predictions is very dangerous, but it would seem reasonable to expect from a study of the diagrams presented, and from consideration of present conditions, that we may look forward to a period of much more stable costs, with narrow price changes, and a general level not greatly different from that which prevails today, but with perhaps a slight tendency downward.

REVIEW OF WOOL MANUFACTURE IN THE LAST HALF OF 1922.

MEMBERS of the Association have generously co-operated in giving data upon which this survey of the past season is based. This is the first of reports to be made semi-annually upon the season just closing. They are to be made for the purpose of having available in future years information concerning the condition of the industry. It is planned to record in the January Bulletin the condition of the season, commonly known in the trade as the spring season, which usually begins about the first of July and closes near the end of the year. The other season, usually opening in January and extending into the first half of the year, known in the trade as the fall season, will be reported in the July number.

TOPS.

The year opened with top-makers fairly well filled with orders, considerable forward business having been booked at the close of 1921 for the heavy weight season. Fine wools were held on a very high basis, because stocks were scarce and all grades of tops sold at fully five per cent above the price levels at the close of 1921.

The feature of the market was the last Government Wool Auction early in March; a very brisk sale resulted; nothing was withdrawn and all was sold. The sale was chiefly of crossbred wools which with tops had gradually been gaining favor through the latter part of 1921. This caused considerable speculation at the Government auction.

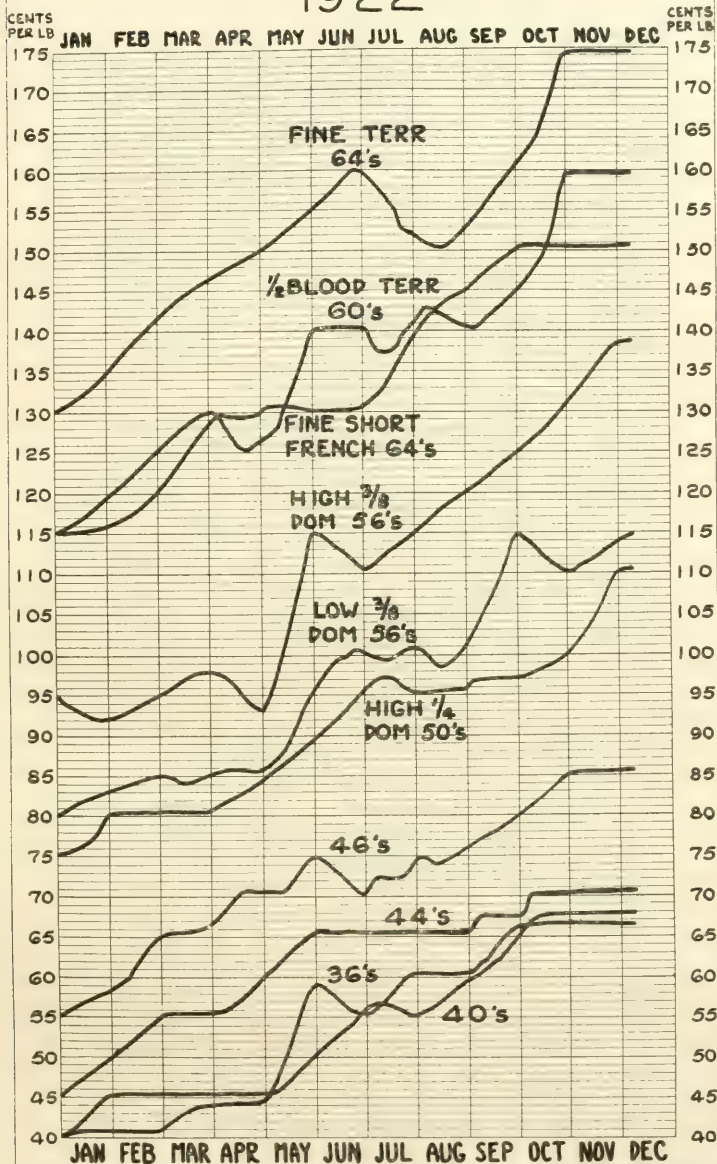
Business was good in February, but as March approached it fell off considerably because manufacturers refused to purchase wools at the high prices asked. By the end of March, however, the situation was considerably stronger. It was quite evident that the Emergency Tariff was to remain in force for an indefinite period until the enactment of the permanent tariff; stocks of wool on the market were very light.

Early in April the market showed considerable improvement, the price of fine tops advancing almost 15 per cent and cross-bred tops fully 10 per cent. The stocks of goods in manufacturers' hands were very light and the situation was considerably improved. By May there was practically no fine wool on the market; the dealers were sold up. Although the tariff was really too high to permit the importation of much top, nevertheless, a fair amount of fine tops was being imported. By the middle of the year a reversal of conditions took place again, the prices of wools and tops being far too high for a satisfactory market; the new season on goods was very dull indeed. Nobody seemed disposed to operate at the advanced prices of April and May, and at last there was a feeling throughout the trade that the enactment of the permanent tariff was not far away.

The business offered was not eagerly taken by the top-makers. Coincidentally there were several serious textile strikes in New Hampshire, Massachusetts and Rhode Island; spinners found it impossible to sell their yarns; and top-makers were not anxious to place much business on their books since they feared that the spinners would not be able to sell their yarns and would, therefore, not take the stocks to account. The same conditions continued through July and August, a fair amount of tops being imported through this period. As September approached the expectancy of a permanent tariff was very strong with a consequent improvement in business conditions. During this month, strikes in a few mills were settled, the new clip of wools was coming on the market, business showed considerable improvement and the price of tops advanced from five to seven per cent. On September 22 the permanent tariff became a law and as a result there was a rush of new business which gave strength to the market because of the removal of the uncertainty concerning rates which prevailed during the long period in which the bill was under consideration.

In October there was a further price advance of 10 per cent on tops, one of the features being a large call for 36s grade, such as are made from 5s South American wools, used principally in novelty yarns; also 40s/44s/46s qualities were much in demand. The top-makers were now taking con-

TOP FLUCTUATIONS 1922



siderable new business; including some advance orders on the new heavy weight season during October and November. Prices of fine tops advanced from \$1.30 at the beginning of the year to \$1.75 during December; 40s crossbred tops having risen from 40 to 68 cents.

One of the principal features of the past year was the great strength of the knitting business in all branches. Prices for high quarter-blood and domestic tops, used very largely for knitting purposes, moved from 75 cents to \$1.15 during the year, there being considerably more call for these than the top-makers could supply from the wool available. Prices for crossbred tops were very strong at the close of the year.

YARNS.

The Summer of 1922 found a large majority of the worsted and woolen spinners marking time in common with the weavers and knitters. Trade was dull and spindles were running at from 55 to 60 per cent of normal, with woolen yarn more active than worsted. This condition was caused chiefly by the delayed passage of the Fordney-McCumber Tariff bill and the uncertainty as to the rates of duty which it would contain when finally enacted. While in the House the bill carried a duty of 25 cents per pound on the clean content of wool, with a limitation of 35 per cent ad valorem, the Senate raised the duty to 33 cents per pound and struck out the limiting clause.

With the final wool rates undecided, buyers would not operate to any large extent, the business placed being in small volume and all for quick delivery. Consequently trade was dull and spinners were forced to quote prices far below replacement value to secure any orders at all. No one branch of the trade was particularly active. The woolen spinners found some business on yarn for overcoatings, and for women's sport suits and skirts, both in the weaving and knitting trades. Sellers of Bradford spun worsted yarns were doing a limited trade in fine and medium yarns for dress goods, as well as in some low counts and grades for the manufacture of knitted outerwear. The French spinners were finding some outlet for fine grades with the dress goods weavers and the

knitters of jersey cloths. The business of the weavers of men's wear, both fancies and staples, and that of the makers of fine worsted and merino underwear was conspicuously dull.

These conditions continued throughout the summer until early in September when reports from the Conference Committee clearly indicated that a compromise rate on wool would be adopted, with the ad valorem limit stricken out. The new tariff law having become effective on September 22 conditions improved rapidly, chiefly because the uncertainty was ended and buyers of all wool textiles had a definite figure upon which to base their values. During October and November prices on all woolen and worsted yarns advanced steadily in sympathy with the steady rise of the world wide prices of raw material.

The improvement may be noted by considering the market price of 2 '40s good half blood yarn over the period mentioned; and in this connection it is of interest to note the fluctuations in the prices of this yarn since the low point of the pre-war year. The quotations follow:

| | |
|----------------------|-----------------|
| December, 1913..... | \$.88 @ \$.90 |
| October, 1918..... | 3.20 @ 3.25 |
| March, 1919..... | 2.45 @ 2.50 |
| April, 1920..... | 4.35 @ 4.40* |
| December, 1920..... | 1.80 @ 1.90 |
| October, 1921..... | 1.65 @ 1.70† |
| June, 1922..... | 2.10 @ 2.20 |
| July, 1922..... | 2.10 @ 2.20 |
| August, 1922..... | 2.10 @ 2.20 |
| September, 1922..... | 2.15 @ 2.25 |
| October, 1922..... | 2.25 @ 2.35 |
| November, 1922..... | 2.35 @ 2.45 |
| December, 1922..... | 2.40 @ 2.50 |

*High post-war point.

†Low post-war point.

The above prices fairly represent the course of the market on all grades of worsted yarns, both French and Bradford systems, as well as on all woolen yarns.

By December the men's wear weavers had had a very fair business and had covered on their yarn requirements. The knitters of fine underwear had placed yarn contracts, with

deliveries running until July 1, 1923, the dress goods and knitted outerwear branches of the industry reporting business much better than in July. The initial business placed with the spinners should keep them well employed until the middle of March. It is impossible at this writing to say whether a sufficient volume of duplicate orders will be placed to keep them busy until the opening of the heavy weight season. Spinners accordingly enter upon the new year with worsted spindles about 80 per cent active, while woolen spindles are about 85 per cent active. The activity of the former is steadily increasing while the production curve of woolen spindles is pointing downward.

FABRICS FOR THE SPRING 1923 SEASON.

The beginning of the light weight season for men's wear ranged generally for woolen fabrics from the first to the tenth of July; and that for staple and semi-staple piece dyed woolens, the latter part of July. For fancy worsteds the season did not open generally until about the first of August. The dress goods season began about the last of August. The active initial season lasted from six to eight weeks.

The opening of the season for men's wear woolens was fairly active with a normal initial business, and this activity continued throughout the season. Men's wear fancy worsteds, though in a somewhat better position than in the previous season, when they were quite outdistanced by the products of the woolen branch, did not do a normal initial business. The average for the initial season was probably not above 20 to 30 per cent of that usually booked in the "opening period". Business with this division was characterized throughout the season by great irregularity of distribution. The total production of light weight worsted goods was even less than indicated by the number of looms employed. Quite unusual for this period of the year there was a considerable production of fall season goods, partly to supply a shortage developed in the requirements for the winter of 1922-23 and partly because farseeing customers, anticipating higher prices for the next heavyweight season, placed orders for the fall of 1923 in advance of the customary time. In worsted dress goods

August was quiet, but September and October showed greater activity for spot delivery for the fall 1922 requirements, with some future business on special weaves for December, January, February and March deliveries; November showed less activity. On December 1, the latest date for which returns are available, 80 per cent of the broad loom capacity of the entire industry and 73 per cent of the narrow loom capacity were in operation as compared with 64 per cent and 60 per cent, respectively, on July 1.

At the opening of the season the general price level averaged 5 to 10 per cent higher than at the beginning of the fall season of 1921. These prices reflected only in part advances in the cost of raw materials which almost all mills had purchased at the lower prices which prevailed prior to the opening. In general, prices of worsteds were below the parity of yarn and raw wool prices, principally due to the fact that the poor business of the preceding season caused lower priced wool, tops and yarn to be carried over, and opening prices for the spring season were based upon the cost of such stocks. With the progress of the season, the exhaustion of old supplies of raw material and the continued advances in the wool market resulted in various advances in the prices of fabrics, ranging from 5 to 15 and 20 per cent above the opening quotations, but these advanced prices were still substantially below the parity of the prevailing wool prices.

Opening prices were even lower than had been expected, doubtless due to there having been considerable idle machinery, particularly in the worsted branch, during the preceding months. There had been such a persistent run for several seasons on carded woolen suitings of the "tweed" type that manufacturers of men's wear fancy worsteds were very hopeful that the Spring (1923) season would develop a normal demand for worsteds, but this did not materialize. When the season was well under way a demand for heavier weight worsteds developed, and it became evident that there was a shortage in the supply of that class of fabrics. This resulted in the ready sale of stock goods and the placing of emergency orders at prices more nearly in alignment with the wool market, which had long before advanced much beyond the cloth price level. The manufacture of these weightier

worsteds thus occupied looms at a time when they are usually employed on spring goods. This suggests a query as to whether or not in the first half of 1923 there will be a sufficiency of light weight goods.

On men's woolen suitings the initial business booked by some mills was very large, the quantity of goods made during the season indicating, in almost all reports, about 95 to 100 per cent of capacity. During the opening season, in men's worsteds a conservative estimate of business placed did not exceed 25 per cent of the total requirements of the season.

The business in worsted dress goods increased so that the full capacity was soon reached in some mills. Other makers of these fabrics were less fortunate, obtaining orders only for their customers' current requirements.

About 60 per cent of woolen dress goods was sold on original orders. In worsted dress goods the delay in the activity of the season was probably due to hand to mouth orders. Buyers hoped for better conditions and delayed ordering beyond immediate requirements.

While men's woolens of some types caused manufacturers to run their mills to capacity, in other types it is estimated that the business of the season on the whole will not average over 50 per cent of the capacity of the mills. The total volume of worsted goods made during the season, including both light and heavy weight worsteds, will probably not amount to more than 65 per cent of the full capacity production.

There is some indication of a demand for closer fitting garments for men and longer skirts for women. In men's wear the tendencies in fashion called for cassimeres and flannels, the former being sold freely. There was some demand for worsted warp and wool filled flannels in overplaid effects. The trend of fashion in men's wear woolens was for smooth finished fabrics. The prevailing designs were checks and hair lines. In woolen fabrics tan shades were strongly demanded in suitings; other prevailing colors were black, brown, and blue, some fairly light shades including grays being called for. In wool dress goods polo cloth, bolivias and other plain cloths were the fabrics most in demand; the prevailing colors were tan, blue, and black. The chief demand in men's wear fancy worsteds was for fancy mixture effects in stripes and plaids,

while in piece dyed fabrics hair line silk stripes in black, blue, brown and tan grounds were called for. For women's worsted dress-goods the dominant fabrics were poret twills and piece dyed crepes. The dominant shades were navy blues and browns.

In men's wear there was a continued preferential demand for carded woolens, with a somewhat less concentration upon tweeds and the rougher fabrics. Indications point to a return toward the more normal proportions of worsteds to woolens. Because of the increased popularity of skeleton lined suits the manufacturers of linings lost some volume of business. In dress goods there was not much call for suitings but the demand for coat and skirt materials was strong. Coats were in wrapping models requiring draping cloth such as bolivias for fine garments. For cheaper garments sport models requiring the polo cloth were used.

The stocks of cloth and clothing in possession of garment makers and retailers for men's wear were below normal, stocks not having increased during the season. For woolen dress goods the stocks at the start were above normal but decreased rapidly in September and October. In the worsted dress goods trade the stocks of cloths were small and this created a healthy situation.

During the season there were no great problems or new strikes. On the contrary, strikes of long duration in Manchester and Lawrence were ended. Employes returned to work without reduction in wages. In New Hampshire the 54-hour week was maintained except in the case of one company where, it is reported, a 50-hour week was agreed upon. At the opening of the season labor was sufficient, in fact abundant in some places, but with the advance of the season the supply became less plentiful, and in some instances a shortage now exists. The outstanding event of the season, mentioned in each report, was the enactment of the new tariff law.

HEAVY WEIGHT FANCY WOOLEN SEASON 1922-1923.

The season for overcoatings would have normally opened in December, 1921, but the general opening was delayed until

February 1, 1922, although appreciable quantities of special and regular lines were sold by various mills before the opening of all lines. The situation was much less chaotic than a year earlier. Rising prices for wool in all the principal markets of the world also helped to strengthen the situation.

The opening price levels were about the same as a year earlier, but the prices of piece goods were not yet following the wool market advances. In other words, there was complaint everywhere of a good volume of business but at little profit.

Mills, able to make fancy backs and extreme fancies, were able to sell on original orders 50 per cent of their season's output, and this was followed by a steady duplicate business until September, when the imminence of a new tariff halted for a month or more all orders which were resumed upon the approach of overcoating weather. Mills making this class of goods were able to sell approximately 100 per cent of their capacity, while the demand for staples and semi-staples was small.

Tan and brown colors were particularly popular in heavy weight woolens and the plaid-back overcoat was made with only a skeleton lining.

Indications for the new season point to small stocks of fancy overcoatings and perhaps a continued demand for extreme fancies, with the probability of slower deliveries next season because of a marked increase in labor shortage.

BRITISH WOOLEN AND WORSTED INDUSTRIES.

BY R. DOMINGO.

THE British woolen and worsted industries like other important trades, have been passing through a serious and critical time since the cessation of hostilities in the great European war. Briefly it may be noted that prior to the outbreak of hostilities business was quite good in the different branches. When war was declared merchants at home and abroad cancelled orders in wholesale fashion. Looms, Cotton's patent frames, and knitting machines were practically at a standstill until the Government came to the rescue with a distribution of orders for khaki cloth, and underwear garments for the troops which were supplemented by similar orders for Allied countries. A seeming prosperity then prevailed in all English and Scottish manufacturing centers, and wages of workers went up enormously, but when the war ceased there was again a dearth of orders, and for a time business was quiet in the tweed and underwear factories, and despite the lack of orders employes were slow to submit to an inevitable reduction of wages. Matters, however, have been fairly well adjusted now, as will be shown later on, and while business has not yet reached its pre-war standard, notwithstanding some reports to the contrary, all the branches have revived to a very considerable extent; the underwear and knitted woolen goods trade more so, perhaps, than the tweed trade, and, at least, it will bear more than a favorable comparison with the shipbuilding, engineering, and other industries.

The particular industries under review are divided into two branches; the cloth trade being distinct from the underwear and the outerwear knitted goods trade, apart from the allied spinning and dyeing branches which are obviously closely interlaced with the larger manufacturing concerns. The English woolen and worsted tweed trade is largely centered in the Bradford district, and Yorkshire, generally, with the

Colne Valley for the cheaper lines, while the South of Scotland, and the Hillfoot districts are the principal Scottish centers noted for high-class tweeds, there being little or nothing of the cheaper tweeds made in Scotland. There is not that mass production in Scotland that there is in English centers. In Yorkshire, for instance, the Scottish manufacturers concentrate on a great variety of fancy and novel makes, and much money is spent on designing with the view of developing new and original ideas.

WOOLEN AND WORSTED TRADE, 1919 TO 1922.

In the woollen and worsted tweed trade there was a substantial boom in 1919 which continued into the early part of 1920 when the slump came almost like a thief in the night, all parts of the country being similarly affected. Merchants had laid in large stocks some months in advance, and these were left on their hands, while goods completed, and in process of manufacture, which were on a large scale, were cancelled, and manufacturers were left with huge supplies of cloth in their warehouses. The contracts that were cancelled had been placed at high prices during the boom; manufacturers had paid extreme prices for the yarns; there was now literally no market for the fabrics, and merchants were unable to meet their existing liabilities. Compromise was general, but it was a trying time for both manufacturers and merchants, the effect of which is still being felt. Business is better now, and the old stocks having been practically cleared at enormous sacrifices the outlook for the future has assumed a rosier hue. Some idea of the slump may be gathered from the fact that worsted cloths which had been selling at 28/- to 32/- per yard dropped to 13/- and 15/- per yard; fine Saxony tweeds which had been selling freely round about 25/- per yard came down to 12/6 per yard, and cheviot tweeds which had been bringing 18/- to 21/- per yard realized only 10/6 to 11/- per yard, and in many cases large sales were made at less figures than those quoted. In such circumstances it is not surprising that many of the British factories were closed for a time in 1921; but towards the end of that year, and during the current year business has revived, and

the prospects for the spring of 1923 are as satisfactory as can be expected. Fine Saxonomies, and botany worsteds are most in demand, but fine cheviots are also finding more favor because they are relatively cheaper. In pre-war days, as now, English manufacturers did more of a home than a foreign trade. On the other hand, about 70 per cent of the Scottish trade was with foreign markets, but this trade has to a large extent been cut off. About 30 per cent of the Scottish trade was all that was needed to supply the best class of customers for Scottish makes in the home markets, and the 70 per cent, went abroad to supply the best class of foreign trade.

TRADE WITH OTHER EUROPEAN COUNTRIES.

Germany, which used to be an excellent market for Scottish made tweeds, is hopeless today, because apart from the small percentage of imports allowed, the rate of exchange is so adverse to that country. Large quantities used to be sent also to the once great Austro-Hungarian Empire to supply the high-class end of the markets there, but their economic condition rules trading out of account. A small quantity is still being sent to some of the divisions of that land, but it is only a fraction of that formerly sent. Europe like other places needs clothing but until the economic life has been remedied trade cannot revive there. It is said that the depreciated German exchange is enabling Germans to produce cheaply for foreign consumption but that is difficult to fathom. It is quite true that when their prices are converted into sterling they are relatively very low, and where they have the raw material in their country it must lead to severe competition, as in the steel and other trades. In the woolen trade they have to buy the bulk of their wool and tops from abroad, with the exchange running dead against them. This fact makes their competition in the wool trade of neutral markets of comparatively little account, as is evidenced by the fact that English and Scottish manufacturers are now doing a fair amount of business with Holland and Belgium. The trade with France is small just now owing to the state of the exchange. Business with Brazil is similarly small, but it is fairly good with Uruguay and the Argentine.

TRADE WITH AMERICA.

It will be known to American readers that about a year ago a step was taken to increase the amount of British trade with America. The main movers in this were the members of the Scottish Manufacturers' Woolen Trades Mark Association of which the principal tweed manufacturers are members. The visits which representatives made to the United States and Canada were productive of satisfactory business, and since then a considerable sum has been and is being expended in advertising Scottish tweeds in American newspapers. The orders received were mostly for cheviot makes, particularly for overcoatings. There has been less doing with America lately, because of the influence of the new tariff. It is however, believed that this will be a temporary check, because the tariff imposes a duty on wool which will to some extent handicap the American manufacturers in their prices, and correspondingly make the burden on the British manufacturers less onerous. Goods, chiefly those of fancy designs and overcoatings, are still being made for the States, and it is expected that a fair amount of business will continue. The visit of manufacturers certainly did a lot to make known in North America the nature of the Scottish tweed trade. In itself the Association referred to is not a trading concern, but exists to administer the collective trade mark under Government regulations. The goods of the manufacturers are sold in the same way as other fabrics, but the trade mark protects alike the merchant, the tailor, and the customer.

FABRICS IN DEMAND AT PRESENT.

At the present time there is a steady demand for fine Saxony and botany worsted cloths, and also for fine chevots for the spring trade. Manufacturers are showing new ranges for the winter season of 1923, but as prices have been advanced by $1/6$ per yard from what they were a year ago it is expected that merchants will be slow to order. They will of necessity, however, have to take up some of the new designs and novelties if they are to keep their stocks up to date. Since fine wools are now very dear, and likely to remain high, no reduction in

the new quotations is probable for several months to come. As things stand employment is quite satisfactory in the English and Scottish tweed manufacturing centers. It should be noted that since the war little or no extra machinery has been installed for the tweed trade, while in some districts the working hours have been reduced from 55½ to 48 hours per week which, generally, means less production and yet some factories have not been able to put all their machinery into full operation.

Apropos of the name "tweed" it may be recalled that when the cloth was marketed in earlier days it was known as "tweels", and it was by pure accident that the name came to be changed to "tweeds". It happened that when a Scottish Border firm sent a parcel of these goods to a London customer the word "tweels" was written indistinctly, and the London merchant construed it into "tweeds". Sir Walter Scott had done much to make the classic River Tweed famous so it was considered not inappropriate that a material which was being used to a considerable extent for sporting and fishing suits should be called "tweeds." In any case the name caught on, and has ever since been used to designate this product of the looms.

In rather recent times there has been a great development in the making of ladies' costume cloths in fine Saxonomies. The colors are extremely varied, almost every shade and hue being produced in plain cloths as well as stripes and checks, the plain makes being for jackets and the more fanciful designs for skirts. This trade assumed great proportions both in the home markets, and on the Continent, but there has lately been a falling off owing to the higher prices charged, and customers have meanwhile gone on to cheaper English makes in preference to the more expensive Scottish styles.

HOSIERY, UNDERWEAR, AND KNITTED OUTERWEAR TRADES.

In the hosiery, underwear, and knitted outerwear trades, on the other hand, expensive as well as cheap grades are made on an extensive scale in the leading English centers like Nottingham and Leicester; only the highest class fabrics are produced in the factories of the South of Scotland, while

manufacturers in the west of Scotland concentrate more on the cheaper qualities. In the case of several of the large tweed manufacturing concerns, spinning and dyeing are adjuncts of the factories, but hosiery manufacturers, generally, have not those facilities in their own places, and deal with independent spinners and dyers for their requirements. The pre-war, and war conditions of the underwear and knitted woolen goods trade for outerwear were much akin to those that prevailed in the tweed industry. This branch shared in the great period of depression that followed the war period, but it recovered more quickly than was the case in the tweed trade. This is accounted for to a large extent by the fact that the underwear manufacturers are nearer the public. They felt the slump earlier, and correspondingly recovered sooner. Many of the makers do a direct trade with shopkeepers, while the tweed manufacturers have to do their business largely through wholesale merchant houses. At one time the hosiery and underwear trade ran along smoothly on plain conventional lines, and manufacturers did not have the expense of making a great variety of patterns, as did their brethren in the tweed trade; but in recent times there has been a marked change until now it almost rivals the tweed industry in the variety of goods and colors produced. It is the tremendous demand that has arisen for all kinds of knitted wool goods for outerwear that has made business in this branch so brisk. There are the usual lines of hose and underwear for which there is a more or less steady demand, but a great amount of machinery has been installed in both English and Scottish centers for the production of knitted sports coats, woolen jackets and vests, jumpers, knitted costumes, scarfs, etc., in a rich variety of colors, and mostly of a high-class, and boys' knitted suits have also been added to the list. The Scottish manufacturers set an example in the quality of knitted costumes, and these were copied in some of the English centers for cheaper kinds. For the moment this has caused a lessened demand for the high-class fabrics except by those houses of high standing. All the other products however, are meeting with a strong demand, and manufacturers, generally, are either working overtime or running night-shifts. Of late shopkeepers have been carrying small stocks, but with the

present demand manufacturers are having difficulty in coping with the requirements because in the absence of definite orders, they were not prepared to buy dear yarns to make heavy stocks which might be left on their hands.

The home trade is large, but there is also a very considerable export trade, especially to the Colonies, and also to South America, and Japanese merchants are likewise good customers. In former years good business was done in France, particularly in silk, silk and wool, and cashmere underwear garments. Even after the war, although prices were high, merchants resumed buying on a fair scale because they needed the goods but there is less doing now owing to the rate of exchange. The trade in underwear with the United States cannot be described as bulky, cotton garments being more in use there, but when American troops came to Britain and the Continent they were supplied with woolen underwear, and since then there has been an increased demand for these garments in a number of American centers. The rise in the price of raw material has compelled buyers to look ahead for their requirements, with the result that this industry is in a better condition than many others throughout the country.

PROFIT-SHARING.

Profit-sharing is not unknown in connection with some concerns, the most notable example in the wool manufacturing industry, probably, being that associated with the plants of Messrs. J., T. & J. Taylor, Ltd., Batley, and Bramley, Yorkshire. It is regarded as the largest privately-owned profit-sharing and labor co-partnership in the country, and the scheme has been in operation for about 30 years. with marked success. All the workers are included, and the scheme provides that after making due allowance for depreciation any profit after paying 5 per cent on capital is apportioned between capital and labor according to their respective amounts; i.e., any percentage of profit received by capital beyond 5 per cent is also declared on the year's total wages, and every worker who has been employed during the whole of the year is credited with bonus at not less than that rate on his or her year's wages. Double bonus is given to those not

less than 21 years of age who have been with the company at least five years and own shares equal to half a year's wages. To provide for this double bonus the wages of those entitled to it are doubled when computing the total wage upon which the bonus is declared. The bonus or wage is not given in cash, but in the form of fully-paid shares in the company. The shares thus allotted entitle the holder in the following year to payment in cash of any discount that may be declared. Such portion of the total wages paid as has been earned by workers who have not remained the whole year does not confer bonus on these individuals, but the whole wages paid during the year rank along with capital for bonus, the amount unappropriated to individuals being carried to a special fund called the Workers Benefit Fund. Including two years when there were no profits the dividends have averaged over $12\frac{1}{2}$ per cent to capital and over 11 per cent to labor. The workers now own more than half the capital and receive over three-fourths of the profits.

WAGES IN THE BRITISH WOOL MANUFACTURE.

In regard to the question of wages, generally the practice in the textile trades during the war was to grant advances commensurate with the increased cost of living. After the war, reductions of wages were arranged on the fall of the increased cost of living. At the end of the war the Board of Trade figures for food, clothing, rent, etc., showed an advance of 185 per cent over pre-war figures, and when those items began to fall no reduction was made in wages until the Board of Trade figures came down to 122 per cent when employers began to ask for a readjustment. Wages were then reduced on the basis of the fall in the cost of living. The figures which follow illustrate the settlement in one section of the industries which may be taken as fairly typical of others. In August 1921 the Board of Trade cost of living was given at an increase of 122 per cent and the terms of agreement for the subsequent regulation of wages are as follows:

(1) When the Board of Trade cost of living figure fell to 105 per cent, the flat rate bonus to men and women paid to men of 13/- per week, will be reduced by $\frac{3}{3}$ to $\frac{9}{9}$, and the flat rate bonus to women of 10/- per week, by $\frac{2}{6}$ to $\frac{7}{6}$.

(2) When the cost of living figure falls to 90 per cent, the present percentage bonus of 40 per cent will be reduced to 30 per cent.

(3) For every further fall of 15 points in the cost of living figure the flat rate of percentage bonuses will be alternately reduced as follows:—Flat rate bonus to men and women—paid to men by 3/3 per week, and to women by 2/6 per week, and the percentage bonus by 10 per cent.

(4) The following table shows how the reduction works out:

| Board of Trade Cost of Living, August, 122% when it falls to | Percentage Bonus August. 40% | Flat Rate Bonus August, | |
|---|---------------------------------|----------------------------|------------|
| | | Men 13/- | Women 10/- |
| 105% | 40% | 9/9 | 7/6 |
| *90% | 30% | 9/9 | 7/6 |
| 75% | 30% | 6/6 | 5/- |
| 60% | 20% | 6/6 | 5/- |
| 45% | 20% | 3/3 | 2/6 |
| 30% | 10% | 3/3 | 2/6 |
| 15% | 10% | 0 | 0 |
| 0 | 0 | 0 | 0 |

(5) When the cost of living figure falls to 105 per cent the present flat rate bonus to apprentices will be reduced by 1/1½d. per week, and when it falls to 90 per cent the percentage bonus will be reduced by 7½ per cent and thereafter for every fall of 15 points in the cost of living figure the flat rate and percentage bonuses to apprentices will be reduced alternately by 1/1½d. per week, and 7½ per cent.

While wages were below other trades at one time, the increases made them quite as good as in other industries, and the asterisk in the preceding figures indicates the present status. There was a readjustment of wages before the war, and the present rate may be taken at from 100 to 115 per cent above the adjusted pre-war rate. In the Yorkshire wool manufacture the rate of wages is regulated by a joint council of employers and employed.

TAXATION A SERIOUS HANDICAP.

Taxation has been a serious handicap on the industries in recent years, and has made it difficult for many firms to carry on. In Imperial taxation the pre-war Income Tax was about 1/2 per £1, and it rose during the war to 6/-, being reduced

this year to 5/- per £1, but on the larger incomes over £2,500 there is a considerable super-tax. Manufacturers had also to pay what was known as Excess Profits Duty during the war at the rate of 60 per cent on profits beyond the pre-war average profit, and one year it was 80 per cent, but they are now relieved of this burden. Local taxation varies in different districts, and on an average will run from 9/- to 16/- or 17/- per £1, on the assessed rental of properties, the general increase being about 75 per cent. If taxation were reduced and Europe were in a more settled state wool manufacture would soon reach its war time prosperity. Never before have there been such attractive novelties of design and style to attract buyers.

SUPPLY AND QUALITY OF LABOR.

The skill of the workers in all sections is beyond question. In some departments there has been a loss of skilled operatives, and in some districts in the tweed trade there is a shortage of weavers many of whom drifted into other occupations during the war. The vacancies have not yet been fully filled. Learners could no doubt be got, but manufacturers have been slow to note the need of bringing those young people on. It will take six to nine months to make learners more or less efficient, according to the branch in which they are engaged. Employers were slow to take on learners when the factories were slack, and seem to have little time to deal with them when they are busy, and the situation will not be satisfactory until they take a longer view.

ECONOMIC CONDITIONS AFFECTING THE TRADE.

So far as the economic conditions are concerned it cannot be said that in the home country there was much diverting of expenditure from clothing to such luxuries as automobiles. There is not the same desire on the part of many of the middle classes to own motor cars as there is in America, but when the working classes were making plenty of money during the war period many of them launched out into what in normal times would have been regarded as reckless expenditure in many directions, and it is to be feared that the number who took a

wise thought for the proverbial rainy day was comparatively small. As matters stand now, however, the tide seems to have favorably turned from the dull times that had recently to be contended with, the horizon is brighter, and a fair measure of prosperity may be looked for in the future for all branches of the British woolen and worsted industries. Much will depend, of course, on freedom from industrial unrest, and a development of that spirit of co-operation between employer and employed which is becoming a more noticeable feature in many concerns.

THE OPPORTUNITY OF THE WOOL INDUSTRY
TO CARRY ON RESEARCH
WITH THE AID OF THE BUREAU OF STANDARDS*

BY F. R. MCGOWAN
Chief, Textile Section.

IN reviewing the establishment and present day functioning of the Government bureaus established for the purpose of promoting and carrying on purely scientific and practical research, one should consider the manner in which the work is conducted. The collective effort of many investigators especially trained in their particular fields but available for aid on any particular problem is possible. This is in contrast with the practice developed abroad, where experiments are carried on through the independent efforts of the various universities with very little publicity and by a number of specialists, whose work has been seldom examined or disputed.

In this country, however, due perhaps to the lack of facilities in our educational institutions these projects have been taken up through public appropriations. The work is at all times under careful control through administrators who must of necessity report to the legislative bodies to give assurance of the need of these appropriations and the adequacy from an economical point of view of the results obtained. This necessarily demands the production of quicker, more evident and tangible results than is the case where private rather than public incentive is the directing force.

IDEAL CENTER FOR RESEARCH.

The city of Washington is an ideal center for research for industrial associations, since within its borders are located over forty bureaus devoted in whole or in part to scientific inquiry. It has been noticed that while the growth of other scientific centers, such as Paris, Berlin and London, has been fostered by institutions of higher learning, this has not been the case in Washington. This difference between this and

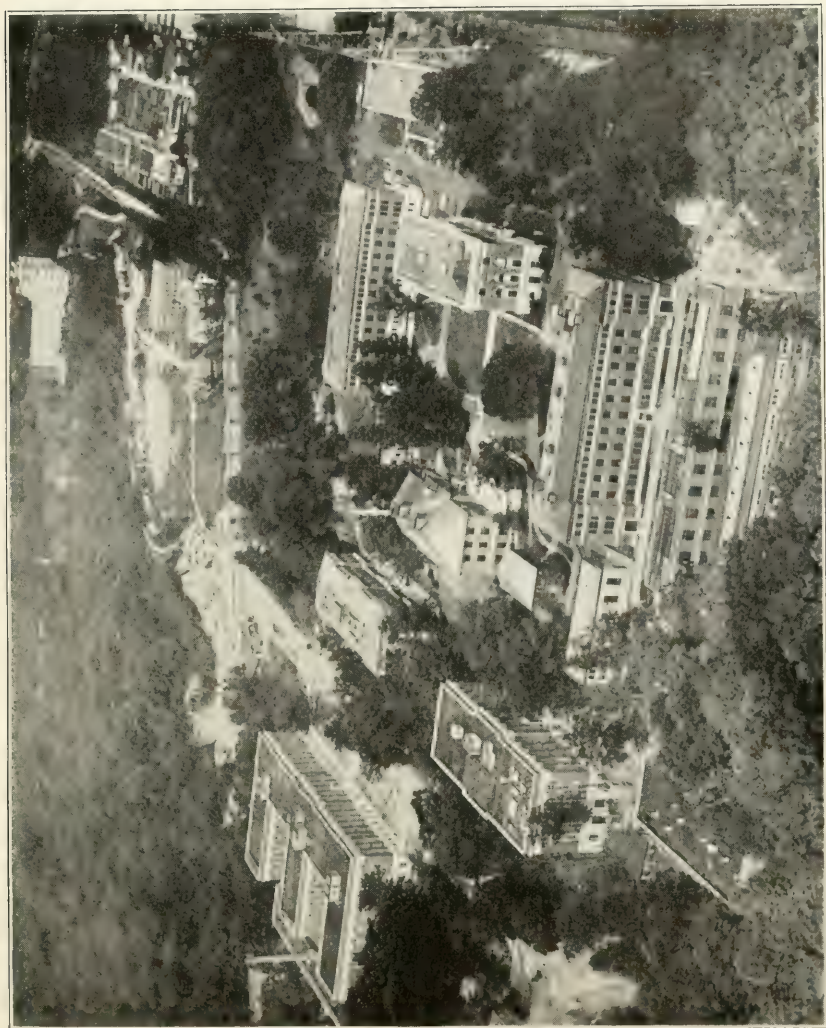
*Published by permission of the Director of the Bureau of Standards.

other countries is more marked when we consider that the combined research institutions of all American industries greatly exceed the facilities offered by other nations, to assist their national industries. The results of the work of the Bureau of Standards, however, are classified and restricted to certain limited fields and to certain industries. The Bureau of Standards performs the function of the maintenance and establishment of standards. It has been developed from one section for the establishment and maintenance of weights and measures to that of an institution of many buildings and approximately sixty-five or seventy individual sections. One of these sections is confined to the textile industry, including cotton, wool, silk and other fibers.

It will be of great interest to the textile industry to note the present allotment of the facilities of the Bureau among a group of industries. It will be seen that the metal industry, both ferrous and non-ferrous, and the industries largely utilizing metals, take up a very large part of the work of the Bureau and other Government institutions. This is perhaps due to the fact that these are further advanced along the lines of scientific inquiry. Their associations are actively co-operating with the Bureau, having maintained for over ten years many large and advisory committees for co-operative research.

ESTABLISHMENT OF STANDARDS.

Going one step further in this classification of the most important industries, it must be conceded that the textile industry stands second, second in value perhaps but first in importance for commercial and every day consumption. The allotment for Government expenditure is very small. Other industries, up to this time, have taken up the greater part of the appropriation. The cause of this is obvious, for the amount secured for research is governed by the interest of the people concerned in any particular class of work. The textile industry seems to be the last to interest itself in research and in the establishment of standards. The value of establishing standards, peculiar perhaps in nature and use, has been discussed considerably throughout the textile industry. The delay has resulted, perhaps, from the lack of typical problems that would show the advantage of this work and the reason



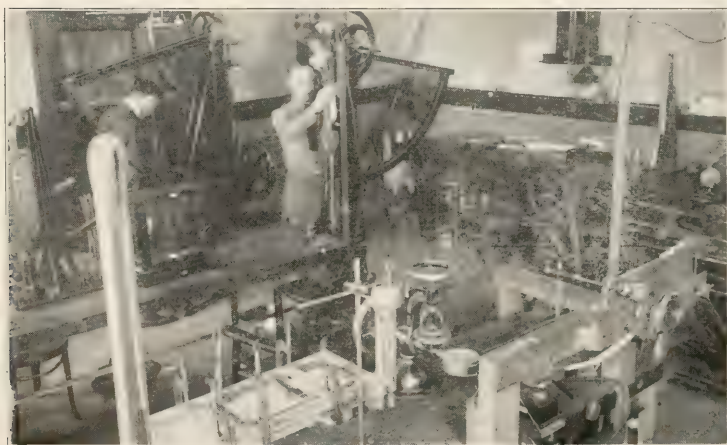
NO. 1 AIRPLANE VIEW OF BUREAU OF STANDARDS.



NO. 2. ROUTINE TESTING LABORATORY SHOWING INSTRUMENTS.



NO. 3. MICROSCOPIC LABORATORY FOR TAKING PHOTOGRAPHS AND MICROPHOTOGRAPHS.



NO. 4 GENERAL VIEW OF FORMER HUMIDITY ROOM FOR TESTING OF TEXTILES.

the textile industry should take it up in massed effort. Doubtless numerous opportunities for any part of the industry to adopt a definite standard, one which can be adhered to when satisfactory and modified when not satisfactory. In fact, with this possibility for change or modification one standard might be adopted for the entire trade. The difficulty has been that in establishing a desirable standard no action has been taken by the manufacturers to accept this standard and adopt it. In the work of the Bureau it has been found very hard to obtain this voluntary adoption. Consequently, investigators have been very lax in giving the results of their work to this particular industry. This fact brings out a very important point, which the Bureau, in its work in attempting to assist the textile interests, believes ought to be settled before proceeding very far into fundamental research. It has been realized that it is of utmost importance, not only to obtain the interest of the textile manufacturer in the adoption of its finished work, but also in the selection of problems.

Assuming that this interest can be aroused and the necessary research work on the part of the Bureau can be carried out, the first important step is to obtain co-operation in the form of advice, material and equipment. A further outline of the best possible means of co-operation would show that the manufacturers by being wholeheartedly linked with the development and solution of the problem would be performing a large share of the work.

CO-OPERATION WITH THE CORDAGE MANUFACTURERS.

The work on standardization for the cordage manufacturers through their association affords an excellent example of just how far such projects can be carried. Often this is a question in the minds of executives of associations. The history of this work dates back about seven years, when the cordage manufacturers held a meeting at this Bureau and drew up specifications for manila rope of various mixtures of manila fiber. The specifications were originally drawn so that all Government departments might have uniform specifications for that particular product. The manufacturers, seeing the advantage to be obtained from this type of work, took steps

to have these specifications adopted commercially and were successful in their efforts. After using these specifications for six years the executives of the association realized that the work could be carried further for the following reasons: standards of quality should be such that they can be changed as the demand and improvement in the art requires; and the manufacturers, through their advertisements of a product in the sale of which there is keen competition, found it necessary to give in terms of performance just what their products would do. As a result, they expressed a desire to know in the exact words of the users how long a rope would last; where certain types of rope would function the best; and under what conditions of storage and usage the maximum service could be obtained. Taking steps to bring about this improvement for their own use, the manufacturers and many of the large users and Government departments formed a committee which was later subdivided into three separate committees—

SERVICE TEST COMMITTEE, whose function it is to prepare and examine data on the variables which influence the life of the materials and also on the characteristic service to which the material is to be put;

LABORATORY TEST COMMITTEE, composed of manufacturers, whose function it is to make tests on specially designed apparatus in order to establish standard methods of test on a standard machine and methods to reproduce service conditions; and the

NOMENCLATURE COMMITTEE, composed of users and manufacturers, whose work is to draw up definitions from the points of view of the user, the investigator, and the manufacturer; the final work is to be a combination of all three interpretations.

The present status of this work is that approximately six manufacturers have designed laboratory apparatus and have performed a large number of tests of their product taking into consideration the variables of lay, twist and fiber contents, making it possible at our next meeting to select one or two types of machines as standard for the industry. After the adoption of these types of apparatus, the work will be confined to measuring the variables in the rope itself. Results will then be available to the user and the manufacturer, and the latter will be able to improve his product, which he desires to do.

Aside from the value of the facts to be obtained from this work on cordage, the eagerness and thoroughness of the committees can be considered one of the features of this project. The committees are formed of both executives and technical men, and the manufacturers are very grateful to the Government for the assistance they are receiving. This project will eventually mean that the manufacturers will have a central point at the Bureau where their common problems can be sent at all times for investigation. This will bring about a saving to them as it will do away with the necessity of maintaining other than routine laboratories in their own plants.

A PROBLEM OF THE HOSIERY INDUSTRY.

The hosiery industry, which is concerned with the most important textile fibers, affords another satisfactory example of what can be done in the development of standards. By examining the tolerances of manufacture, that is, the actual reproduction of an actual size of stocking, it is possible for the manufacturer to effect an economy in making the desired variation between hosiery sizes balance up with the tolerances in any one particular size.

To illustrate this, a study of the results of measuring actual dimensions of a thousand pairs of stockings, all marked size 10, showed a maximum variation of plus or minus three-quarters of an inch, that is, some measured $10\frac{3}{4}$ inches, some $9\frac{1}{4}$ inches. In balancing the manufacturing tolerances with the desired tolerance of plus or minus $\frac{1}{4}$ inch, inasmuch as hosiery sizes are 9, $9\frac{1}{2}$, 10, $10\frac{1}{2}$, etc., and assuming that a stocking measuring slightly over $9\frac{3}{4}$ inches would be called a No. 10, there is no apparent need for making hosiery in six sizes which can be made in three sizes by making quarter sizes, for instance, $9\frac{1}{4}$, $10\frac{1}{4}$ and $11\frac{1}{4}$. The elasticity of the material and the fact that the hose after knitting is placed on a wooden form of exact measurements showed by experiments with this standard that a more accurate measurement of size of stocking as labeled was obtained. The advantage to the manufacturer was that he saved about 40 per cent of the cost of goods in manufacture.

This project, together with about ten others, is being considered by the National Association of Hosiery and Underwear Manufacturers. The hosiery manufacturers are gradually realizing the importance of this work and the members of the Association are co-operating to a greater extent than when the projects were first started. After the establishment of our recommendations through reports to the Association there remain for general adoption by the trade such items as nomenclature, standard method of measuring the size of foot, standard method of testing such qualities as breaking strength and bursting strength. These items should be presented to proper executive committees appointed to receive these reports. A general adoption by a majority of the industry should then follow.

PROJECTS FOR WOOL MANUFACTURE.

The above classification of projects for the hosiery industry is such that the same classification with the proper changes for the finished products can be carried on for any particular industry. For the wool manufacturers alone the development of standards of moisture, regain, shrinkage and such other trade standards as the association may desire can be taken up. It should be realized, of course, that the desire for the work should be accompanied by a willingness to furnish materials and sufficient aid to expedite the work and make it as exact as possible. It must be conceded that in the establishment of such items as shrinkage of wool, the method of shrinkage and material to be tested are matters in which the industry itself could give valuable aid to an institution such as this Bureau. To illustrate again the importance of utilizing the facilities of the industry itself in undertaking a particular problem, the establishment of standard regains for this country would include not only the work of the textile section of this Bureau, but such other branches of the Government as the Weather Bureau, Department of Agriculture, Customs Division of the Treasury Department, Bureau of Foreign and Domestic Commerce, and other representative bureaus. According to present day feeling, research is no longer a matter of a laboratory enclosed by four walls, but rather it is a project which must consider every possible function and classifica-

tion of functionings. The organization to control the advancement of the problems is most vital. The Bureau realized this when the conference of textile interests was called for September 27, last, at which representatives from various associations and individuals at large were called to develop a plan of co-operation with the Bureau. As a result an advisory committee was formed which should govern at all times not only the problems to be undertaken but the method by which they are approached and carried on and further the placing of the results in such places as would be most useful.

This new development brings attention to the fact that in addition to the laboratory and equipment necessary for carrying on textile research problems, the Bureau has extended its services in provoking such executive control and co-operation from the industry as to make any particular problem most useful.

The Bureau a few years ago attempted to establish an experimental wool mill, but it was soon realized that miniature sized machines to reproduce such actions on the raw product as were produced on the commercial apparatus would not prove satisfactory. The investment itself cannot be considered a total loss because there are a number of investigations in which the machinery can be used that can be handled. Whether or not these projects are of immediate value to the textile industry remains to be settled, but present indications are that this is not the case and consequently the equipment has been set aside for other work.

TESTING OF FINISHED PRODUCTS.

The chief development of the textile laboratory at the Bureau has been in the testing of the finished products. This development has been due mostly to the demands from other governmental departments for results of tests on materials which they have purchased. This work has been increased not only by the number of samples received but by the number of tests on any one particular sample, showing that textiles are being purchased with a higher degree of knowledge of the purpose for which they are to be used and what should be expected from them. These materials include wool materials of various types of finish.

One project of particular interest to the woolen manufacturers is the development of specifications for army and institutional purposes. Present day practice of purchasing blankets is by weight, construction and linear dimensions, which is sufficient so far as describing the material is concerned, but for the extreme conditions in which these materials are used it has been realized that another factor should be established. Consequently, the Bureau is developing a method of measuring that property most essential in the blanket, namely, the heat retaining property. The problem can be said to be well under way, but it will perhaps never be satisfactorily completed until the woolen and cotton blanket manufacturers extend their co-operation.

The Bureau took up this problem because requests for data of this nature were received about five years ago from the War Department in order that it might obtain suitable coverings for the Army on the Mexican border. To meet the exigency temporary apparatus was set up which was arranged to give comparative results. These preliminary results pointed the way toward the extensive investigation which is now in progress.

GOVERNMENT SPECIFICATIONS.

The factors determining whether or not Government materials, such as blankets, should be different from commercial articles should be decided not only by department or consumer, but also by the manufacturer. This institution believes that the manufacturers should utilize their familiar phrase "Tell us what you want and we will make it." At present this opportunity is available through the functioning of the Federal Specifications Board which submits to the manufacturer for his criticism and suggestion the combined Government specifications for all Government departments for any one product.

Here again for proper assimilation of ideas of manufacture, it will be necessary for every particular industry to select a committee to work with this institution so that no group of manufacturers can formulate specifications eventually to monopolize the Government demand for any one particular product.

PROBLEMS ALREADY SUGGESTED BY WOOL INDUSTRY.

Careful examination of past correspondence between wool manufacturers and Bureau officials shows that at all times there have been satisfactory openings for co-operative work. Correspondence shows that the executives of the wool associations were at all times ready and willing to co-operate. At the same time the Bureau was eager to show what could be done through this co-operation and to show how scientific investigational work could be of assistance to the textile industry. No typically satisfactory example ever resulted. No standards of benefit to the textile industry were established or adopted. Various problems were suggested at different times and even at a recent date wool manufacturers through a Committee appointed by the National Association of Wool Manufacturers presented to the Bureau a list of problems which are as follows:

1. The standardization of dyestuffs.
2. Comparison of the two processes of cleansing wool, namely, the usual alkaline process and the naphtha; the advantages and disadvantages of the processes themselves and the effect on the working properties of the wool fiber.
3. A consideration along the same lines of the two processes of carbonizing wool or wool fabrics, namely, the chloride of aluminum process and the sulphuric acid process.
4. The relative desirability of fabrics made from carded yarns and from worsted yarns from the standpoint of warmth and wearing qualities.
5. The effect as to warmth and wearing qualities of the introduction into the blend with virgin wool of
 - a. Shoddy of different grades
 - b. Cotton
6. The limits of the advisable use of petroleum neutral oils in combination with other oils for the purpose of lubricating the fiber before carding, taking into consideration as well the important point of thoroughly eliminating this oil from the woven fabric by a scouring process. In carded woolen mills various oils and combinations are used, but, heretofore, olive oil and peanut oil have been used in worsted mills, and the inquiry applies to both classes of manufacture.
7. The determination of the amount of grease desirable to leave in wool when scoured.

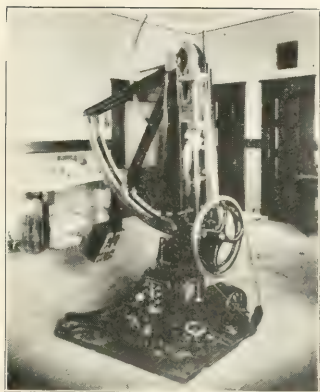
The problems listed represent ideal problems. Some of

these, especially in regard to the wearing qualities, will be confined to the laboratory alone, but the procurement of samples and classification of materials must necessarily come from the industry. The other problems are of such a nature as to require that they be carried on in an industrial plant. The success in operating and in making progress on these problems was not satisfactory to either side. It was noted that some of the manufacturers were disappointed in not receiving a complete report of suggested changes and conclusions. The Bureau realized that its ability had been put to test to do some work on these problems and requested assistance, which was not forthcoming. The result was that a temporary delay was necessary until new steps had been taken to have the wool manufacturers realize the assistance that must be rendered. The experiments carried on some seven or eight years ago on the shrinkage of wool in scouring showed that tests had never been carried sufficiently far or had not been made on a sufficiently large number of samples and varieties to warrant the adoption of any definite set of standards. Whether or not experiments were carried on with sufficient detail could be left entirely with the industry rather than with the laboratory.

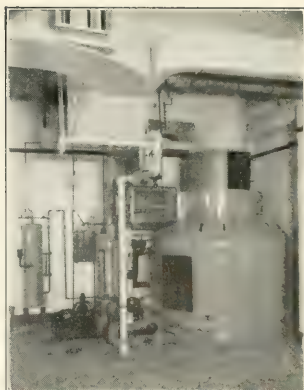
STANDARD NOMENCLATURE.

The standardization of definitions is another important consideration which the manufacturers should consider and with which this Bureau will be glad to assist, not only for use by the manufacturer but throughout the entire allied parts or branches. The importance of establishing a standard nomenclature need not be emphasized because all realize the value of a definition to an investigator. It is one of our efforts to have a standard nomenclature available for any scientific investigator in order that he may fully understand the terminology and confine his efforts in a pure research investigation, to the direct problem.

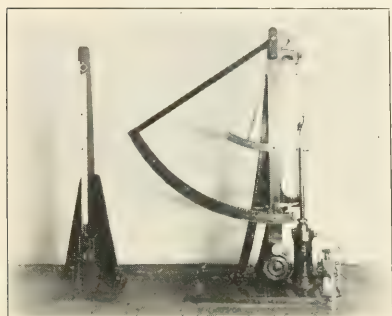
The following reply to a direct question to a hosiery expert is cited as an example of the confusion that sometimes exists with the wool terms. The question was asked, "If you were permitted to ask several questions concerning wool manu-



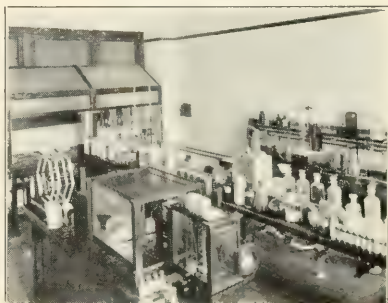
1000 KG. (2204 LBS.) CAPACITY
BREAKING MACHINE.



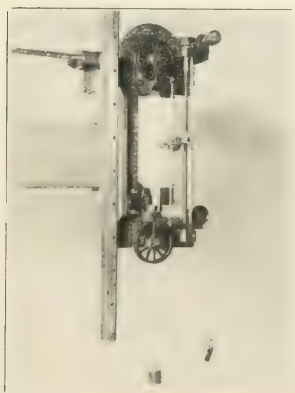
APPARATUS FOR AUTOMATICALLY
HUMIDIFYING AND DEHUMIDIFYING
TO OBTAIN STANDARD CONDITIONS.



50 KG. CAPACITY BREAKING MACHINE
FOR YARNS, CORDS AND THREADS.



CHEMICAL RESEARCH LABORATORY
FOR TEXTILES



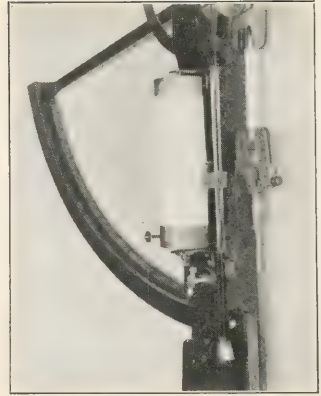
TEAR TEST MACHINE.



MICROSCOPIC LABORATORY COLLECTION OF
AUTHENTIC SAMPLES OF TEXTILE FIBERS.



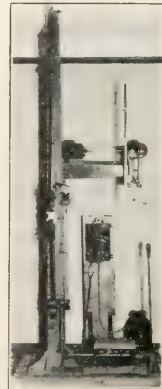
BATTERY OF TESTING MACHINES
OF DIFFERENT CAPACITIES.



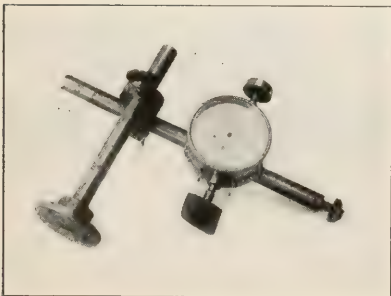
RECORDING ATTACHMENT
ON BREAKING MACHINE.



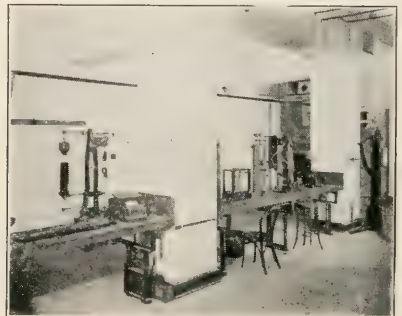
200 KG. CAPACITY
BREAKING MACHINE.



TEAR TEST MACHINE.



APPARATUS TO MEASURE TENSION
IN FABRIC ON THE LOOM.



GENERAL VIEW OF
CONSTANT HUMIDITY ROOM.

facture which would be of utmost assistance to the hosiery manufacturer, what would be the nature of the questions?" The reply was, "The establishment of definitions to answer such questions as What is regain? What is shrinkage? What are yarn size tolerances? What is a light, medium and dark oxford, and what is the percentage of white used in each? What is cordovan? What is heather?" Examining these questions in order, the hosiery manufacturer is not so vitally interested at first in the quality of the material received as he is in the nomenclature and definitions of the terms used.

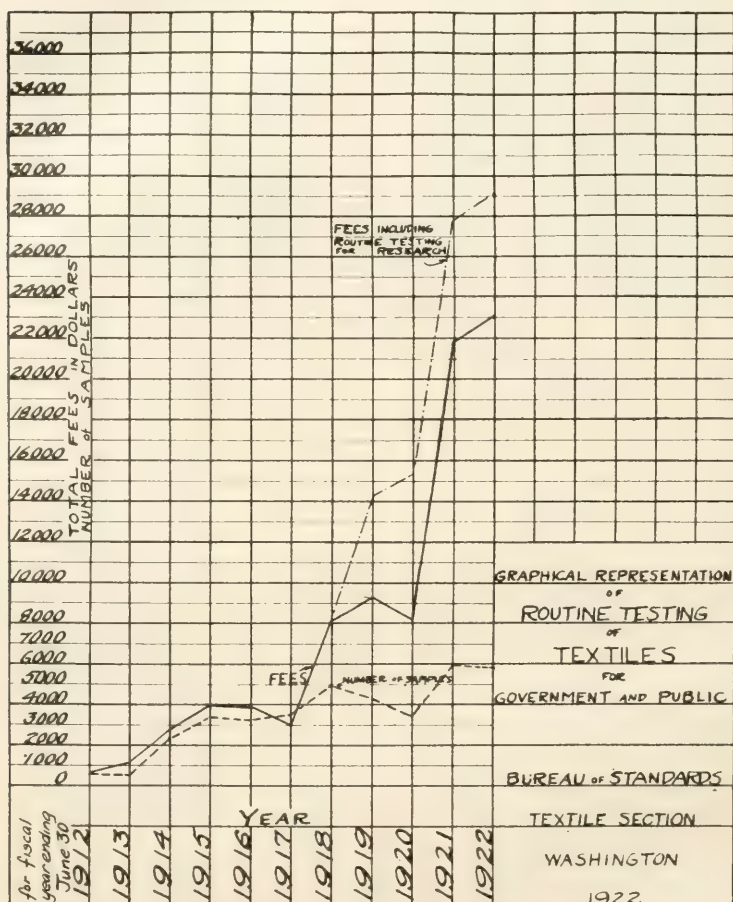
The hosiery manufacturers and the cordage manufacturers are now attempting to define the numerous terms employed in their respective industries, realizing the advantage of having the industries themselves define these words instead of having them defined for them by Federal agencies, customs courts, etc.

ADVISORY COMMITTEE.

The work of appointing committees by the various branches of the industry to co-operate with the Bureau on research and standardization is progressing very satisfactorily. A main advisory committee composed of one member from each association or part of the industry and also selections by the Bureau has been appointed. It now represents the wool, silk and cotton industries with committees from the cotton finishing, window shade, cordage, brush and broom industries, while others have expressed the desire to have representatives appointed, but have not yet held meetings. In addition, technical committees have been formed. That for the wool manufacturers is to be appointed by the main committee for each problem. Numerous other committees to investigate special problems of the various sections of the textile industries have been appointed.

FACILITIES OF THE BUREAU OF STANDARDS.

The facilities available at this Bureau for conducting experiments have been increased considerably within the last three years. Photographs 2, 3 and 4 show the entire equipment and facilities of the textile section from its beginning until 1919. The space occupied consisted of four rooms,



three of which are shown in these photographs. During 1918-1919 the Industrial Building (the E-shaped building at the extreme left in photograph 1) was built, and the textile section, with considerable additional space and equipment, was transferred to this building. Photographs show examples of the equipment and space but not the general offices for administrative and study work.

The graph shows the tendency of the Government departments to increase the demand for making physical tests and also the increase in the number of tests on any one product.

In conclusion, it is not the purpose of this article to list definitely what problems can be undertaken for the wool manufacturer. The Bureau believes that a better procedure would be to have the committee, appointed recently, examine our facilities, and requests that its members, having a very definite knowledge of all the administrative and technical functioning requirements of the industry, state what problems can be considered and what co-operation is necessary. Consideration should also be given to such research institutions as the Lowell Textile School and the Massachusetts Institute of Technology. The enlistment of all institutions and facilities in this country is of utmost importance. Both these institutions have recently entered this field of work. The Lowell Textile School, interested in the training of men for the textile industry, realizes that great benefit would also result from educating its students in textile research. With reference to the Massachusetts Institute of Technology, this institution is attempting to establish industrial relations to aid the industries. Dr. S. W. Stratton, Director of the Bureau of Standards, has recently been elected president of the Institute, and no doubt the industry will find its facilities available even to a greater extent than at present. An examination by this committee of all opportunities could perhaps be made and a report could outline service similar to that now available for other industries and for other sections of the wool manufacture.

THE COURSE OF WOOL PRICES FOR THE
LAST SIX YEARS.

AN ANALYSIS OF THE SITUATION.

BY ALBERT W. ELLIOTT.

At the annual meeting of the American Association of Woolen and Worsted Manufacturers held in New York City on December 6, 1922, Mr. Albert W. Elliott of Jeremiah Williams & Company, Boston wool merchants, read a valuable paper in which he traced the course of prices for wool in the world's markets, discussed the causes producing them, and indicated what he believes will be the trend for some years to come. Mr. Elliott's contribution to this subject will be of great interest not only to all wool growers and wool manufacturers, but will also be one of permanent value to the history of the industry in an era whose influence will be felt for years to come. The paper was as follows:

Six years ago I read a paper before you predicting an era of high prices and eventually as a result of high prices a sufficient and plentiful supply of wool.

The war continued for two years. There were insufficient ships to transport the clip of the Southern Hemisphere to North America and Europe. Even had there been plenty of ships, the bulk of the wool using machinery of Europe was within the German lines, and it was only the machinery of Great Britain, Scandinavia and Italy, and the machinery of North America and Japan that was in a position to consume wool. During the four years of the war about 50 per cent of the wool using machinery of the world consumed nearly 75 per cent of the world's wool clip each year, but at the end of each of those four years there was about one-quarter of the world's clip unconsumed, and at the end of the war there was on hand the equivalent of one whole year's wool production.

The high prices for wool that prevailed during the last two years of the war were not due to any scarcity of wool, but to a scarcity of ships to bring wool from the countries where the wool was produced to the countries where the wool could be consumed.

Thus, in November, 1918, there was in existence the equivalent of one whole year's wool production and another clip was

beginning to move out of the Southern Hemisphere.

Why then did not prices decline with a quantity of wool available for consumption in the year 1919 equal to two year's wool production, or say over five billion pounds of wool? The answer is two-fold.

First: The largest part of the surplus wool was in the hands of the British and United States governments, and the British Government had purchased all the wool that was to be shipped out of Australasia prior to July 1, 1920. Our own Government held rising 500,000,000 pounds and the British Government held rising 1,000,000,000 pounds of wool already sheared, and in addition owned and controlled over 1,500,000,000 pounds of wool to be sheared in the twenty months following the armistice.

The war ended in November, 1918, and in December, 1918, the United States Government began auctioning off its wool holdings and disposed of something over 300,000,000 pounds prior to the temporary closing of its auction sales at the end of June, 1919. These auction sales were resumed in November, 1919, and by the following June, 1920, the United States Government had disposed of about 90 per cent of the stock on hand at the time of the armistice.

ALLOTMENT SYSTEM KEPT PRICES UP.

From the time of the armistice until the late spring of 1919, the British Government issued wool at fixed prices to its own manufacturers and to those of certain of its Allies. Late in the spring of 1919 auction sales of Government wools were resumed in London with comparatively limited offerings, but there was still a continuance of the allotment system to British manufacturers.

The whole combination of auction sales and allotments was cleverly devised, however, so as to maintain high prices in the auctions, and the quantities offered in the auctions plus the allotments to the British manufacturers were so inadequate that the price of both merinos and crossbreds during the latter part of 1919 and the early part of 1920 advanced to very dizzy heights and prices in all the other wool markets of the world followed suit.

In March and April, 1920, we had the spectacle of choice Australian merino wools selling both in London and in Boston as high as \$2.50 per scoured pound, and Ohio fine unwashed delaine sold in Boston on the same basis, or at \$1.02 in the grease.

There was no plan on the part of the United States Government to hold prices up or to put them up. While the wools were not sold without limit, the basis of the limit was the old

British Government issue price, which was far below the prices at which the United States Government had purchased its wool stock. The wool was offered in ample quantity, as evidenced by the fact that during the series of auctions which began in December, 1918, and ended in June, 1919, only 325,000,000 pounds were sold out of a total offering of 450,000,000 pounds. The policy pursued by the War Department was to get out of the wool business as quickly as possible without making any undue sacrifice of what was really a very valuable raw material, and without unduly depressing the market on which the American wool grower had to sell a clip of wool which he had raised under very high production cost.

DIFFICULTY OF DELIVERY HELPED TO SUSTAIN HIGH PRICES.

While it appeared to be the policy of the British Government to feed out its wool stocks on a hand-to-mouth basis, offering just about enough each month to supply the requirements of British and Continental manufacturers, it must be remembered that owing to the disorganization after the war and the very great congestion at the docks where the wool was stored, it very probably would have been physically impossible for the British Government during the year 1919 and the early part of 1920 to show, sell, transport and deliver wool in sufficient quantity to stock up and operate the wool using machinery of Great Britain and the Continent.

It may be that this lack of physical facilities for getting the surplus wool into consumption had more to do with the boom prices of the latter part of 1919 and the early part of 1920 than any deliberate intention on the part of the British Government to create a boom in wool prices.

The British Government made a profit of upward of £40,000,000, on its wool deal, while the United States Government lost \$75,000,000.

Thus, the first cause of rapidly advancing prices for wool, in spite of a very large surplus in existence at the end of 1918, was due to the fact that at the time stocks of wool in the hands of manufacturers all over the world were very small, stocks of manufactured goods in the hands of distributors were very small and poorly assorted, and the vast surplus of wool in existence in the world in the fall of 1918 was largely under the control of the British and the United States governments, and practically the entire stock of wool in Europe and the United States was under control of these two governments. The only wool not under Government control in the fall of 1918 lay in South Africa and South America, many thousand miles from the consuming centers, and shipping at that time was still scarce, costly, and difficult to obtain.

GENERAL INFLATION HELPED PRICE ADVANCES.

The second cause of the advance in wool prices was due to the huge issues of paper money during the war and immediately afterward, and the general inflation resulting therefrom. Pockets bulging with money enabled the proletariat for the time being at least to pay very high prices for anything it wanted.

Wool prices all over the world were very high in late 1919 and early 1920, and the demand for manufactured goods was so large that huge profits were added all along the line to the cost of goods made out of high priced wool, retailers asking \$75 to \$100 for ready made suits which in 1914 sold for \$25 to \$40. Everything else made out of wool was also dear in proportion.

Late in 1919, the Federal Reserve Bank issued warnings and increased the re-discount rates, and this eventually resulted in an 8 per cent rate for commercial paper, with very little money available even at that figure. The deep snows of the winter of 1919-1920 slowed up the delivery of merchandise all along the line, and hampered the processes of manufacture. Still the action of the Federal Reserve Bank and the hard winter had had so little effect on the wool market, that late in April, 1920, \$2.50 clean scoured was paid at auction in Boston, for choice Australian merino wools and early in May in Utah seventy-two cents in the grease was paid for a million pound pool of the so-called Jericho wool, and wool dealers were preparing to move the 1920 domestic clip of wool at unheard of prices. Just about this time the buyers' strike, which had begun about January first, began to get on the nerves of the retailers. Either the public would not or could not pay the prices demanded by the retailers, and when the retailers finally realized this, there came such a flood of cancellations that within a short time manufacturers who thought they were booked for months ahead, found they had a very considerable quantity of stock goods on hand.

PRICES DECLINED IN 1920-1921.

At an auction held in May, 1920, only three weeks after the famous April auction of which \$2.50 clean was paid, and the entire offering of thirty thousand bales was sold, the same kind of wool sold on a basis of \$1.80 clean and over seventy per cent of the entire offering was withdrawn. Soon came one or two large failures among wool merchants and a great number of smaller concerns were embarrassed, and the famous wool panic of 1920 was in full swing. In April, 1920, fine medium French combing territory wool sold at \$1.90 clean,

and long fine staple territory sold at \$2 clean.

By January 1, 1921, fine medium French combing was selling at seventy cents clean and fine long staple at eighty cents clean. Other grades sold at proportionately low prices. The low point of the decline was reached about May 1, 1921, when owing to the pressure of a great deal of so-called distressed wool, the price of good fine medium French combing wool dropped under sixty-five cents clean and the price of long staple fine under seventy-five cents clean, half blood to sixty cents clean, three-eighths to forty cents clean, quarter blood to thirty cents clean, and, for several months following May, 1921, the wool market in this country ran along on about this basis of value, in spite of the Emergency Tariff with its thirty cents per greasy pound duty on wool.

In Europe, however, the decline in wool prices did not begin until two or three months after it started in the United States, or say about the end of July 1920. Of course, when the drop started here no one expected there would be a drop of sixty-five per cent before the decline had run its course. European machinery was still busy, and Europe for a little while regarded the conditions here as temporary and not of world wide importance. However, when European retailers began to try to distribute merchandise based on high cost raw material plus high profits, prices crumbled away in Europe as they had here.

The first Australasian clip to be sold for growers' account since the clip of 1915-1916 was the clip of 1920-1921. The British Government had bought the preceding clip of 1919-1920. When the marketing of the 1920-1921 clip in Australia began in October, 1920, it was soon seen there was no buying power, and values melted away just as they had melted away in the United States first and Europe afterwards.

As an example of how cheap wool was in Australia in December, 1920, we in that month bought in Australia fifteen hundred bales of 64-60's wool, which we combed afterward at the Arlington Mills, and the cost of the dry-combed top out of that wool was only sixty cents per pound including combing charges. Of course, this was the low point for that kind of wool.

Soon afterward the market in Australia was stimulated slightly by American purchases in anticipation of the Emergency Tariff bill and prices advanced somewhat. Still Australian wool continued exceedingly cheap for the entire period during which the 1920-1921 clip moved, and at a sale in Geelong in July, 1921, we picked up a few hundred bales of 66-70's combing, not a single lot of which cost as high as sixty cents clean landed in Boston.

The low point in wool prices in the United States was

May, 1921, and the low point of wool prices elsewhere in the world was reached soon after.

The advance in wool prices all over the world which began in the early fall of 1921 occurred first in merino wool. The advance came first in merinos for the following reasons:

CAUSES FOR RISE IN PRICES FOR MERINOS.

First—There had been a large decline in the production of merino wool during the preceding ten years and also during that period Japan had installed a very considerable quantity of worsted and woollen machinery and had become a very considerable user of wool, and especially merino wool.

Australia in 1911 produced 85 per cent of merino wool and 15 per cent of crossbred wool. In 1921 Australia produced 65 per cent of merino wool and 35 per cent of crossbred wool. In other words, in a clip of 2,000,000 bales the production of merino wool had fallen from 1,700,000 bales to 1,300,000 bales, a decrease in the production of merino wool of 400,000 bales, or about 130,000,000 pounds.

In 1911 the clip of the United States was about 300,000,000 pounds and the production of 60's quality and above was about 50 per cent. In 1921 the clip of the United States was about 250,000,000 pounds and the production of 60's and above was only about 40 per cent. During that period there was a decrease in the production of merino wool in the United States of about 50,000,000 pounds.

In Uruguay, in 1911, the proportion of merino wool in the total clip was about 80 per cent; in 1921 it was only about 20 per cent. Here, again, was a decrease of nearly 50,000,000 pounds. In Argentina, never in recent years a very large producer of merino wool, the proportion of merino to the total clip also declined, probably a loss of at least 25,000,000 pounds.

Therefore, in Australia, North America and South America the production of merino wool in the last ten years has declined nearly 260,000,000 pounds, or the equivalent of about 800,000 bales of Australian wool, which is about equal to 50 per cent of the entire production of merino wool in Australia ten years ago. South Africa is the only section of the world where the production of merino wool has held its own.

JAPAN A FACTOR IN SITUATION.

We have, therefore, on the one side Japan entering the lists as a wool using country on a considerable scale and largely as a consumer of merino wool, and on the other hand during the last ten years a reduced production of merino wool in amount

equivalent to nearly 800,000 bales of Australian wool, or about 50 per cent of what was the production of merino wool in Australia in a favorable year before the war.

Taking into consideration the increased population of the world as compared with ten years ago, and the increased purchasing power due to the inflated currencies of Europe and the United States, is it to be wondered at that once the surplus of merino wool accumulated during the war period had disappeared, the price of merino wool began advancing by leaps and bounds, and that while today it is still 50 per cent below the peak prices attained in the post-war inflation of 1919 and 1920, it should have advanced nearly 100 per cent from the low point established in July, 1921, when it was selling for only 25 per cent of the peak prices of early 1920?

In other words, choice merino combing wool that sold in 1914 at 70 cents clean, sold in the winter of 1920 at \$2.40 clean; later, in July, 1921, it sold as low as 60 cents clean, and today is selling at about \$1.20 clean.

INCREASED COST OF MAKING CLOTHING.

The second reason for the comparatively large demand for merino wool is the greatly increased cost of converting wool into garments. The difference in the cost of the raw wool necessary to make a suit of clothes as between the choicest Geelong merino and a coarse South American crossbred wool is only about \$3. Of course, this \$3, by the time it shows up in a suit of clothes on the retail counter, has probably been swelled to \$7.50, assuming that the suit out of the coarser wool is tailored as well as the suit out of the finer wool. At any such difference as \$7.50 the consumer is going to strain himself to buy the suit made out of the finer wool, and the result is that when the actual difference in cost between the two suits is less than the intrinsic difference in their value, a larger proportion of the suits made out of the finer wool will be sold. This process, which leads to a larger consumption of merino wool, has been going on ever since the close of the war, and it has used up whatever surplus of merino wool existed at the end of the war and is consuming merino wool today at a rate a great deal faster than it is being produced.

The increased price of merino wool first affected the price of fine crossbreds and during the last few months, and especially lately, the gap between the prices of merinos and fine crossbreds has been rapidly closing. At present the same process is gradually closing the gap between the price of fine crossbreds and medium crossbreds. At the rate of consumption since July, 1919, there was not nearly enough merino wool to go around, and the big increase in its price forced the

demand to down the finer crossbreds, and in turn the increase in the price of these has created a demand for the medium crossbreds, so that the price of these medium crossbreds has moved up to a point more in keeping with the price of the finer crossbreds.

LOW CROSSBREDS STILL UNDER 1914 PRICES.

As yet, the lower grades of crossbreds, while they have had a very decided advance from the low point, are still selling in the outside markets of the world at below the price level prevailing in July, 1914. Buenos Aires 40-44's are selling in bond today at 29 cents clean, as against 32 cents clean in July, 1914, and 40-36's are selling in bond at 23 cents clean, as against 29 cents in July, 1914. These wools are still very cheap, and, were it not for the fact that a large part of the old wool still to be sold by the Bawra consists of wools grading 44's and below, I believe that these so-called low crossbreds would be selling for higher prices than at present, as the price of them is still considerably below the cost of production.

With the best fine wools selling on a basis of \$1.40 to \$1.50, duty paid, half bloods at \$1.20 to \$1.30, duty paid, three-eighths at \$1.05 to \$1.15, duty paid, quarter blood at 85 cents to 90 cents, duty paid, it seems to me that 46's crossbreds at 70 cents, duty paid, 44's at 60 cents, duty paid, and 40's at 53 cents, duty paid, are sooner or later bound to make a place for themselves. Under the Payne-Aldrich law a very considerable quantity of coarse crossbreds were used on a basis of 45 cents to 50 cents clean, duty paid, during periods when Ohio delaines cost only 70 cents clean and fine medium French combing territories cost only 65 cents clean. The difference in the cost between the fine and the coarse in those days was only 20 cents to 25 cents per scoured pound. Today the difference between the same grades is 70 cents to 85 cents per scoured pound.

REASONS FOR HIGH WOOL PRICES.

We all recognize that wool prices are high. Why?

In the first place it was apparent from 1910 onward, that each year on the average the wool consumption of the world was gradually overtaking the production. In fact, probably since 1894 or 1895, over any period of five years, the world consumed the entire production of wool grown during that period, and there was no surplus. Of course, both the production and consumption of wool varied from year to year, and prices fluctuated according to abnormal or subnormal production, or abnormal or subnormal consumption. From

1880 to 1900, production probably increased faster than consumption, and prices on the average gradually declined from price levels prevailing in the 1880's. However, since 1900, and especially since 1910 (with the exception of the war period), I believe consumption was gradually outstripping production. Since the end of the war, in spite of the 1920 slump, wool has undoubtedly been consumed much faster than it has been produced, and, therefore, the surplus accumulated during the war, equal in my opinion to 2,500,000,000 pounds of all kinds of wool, has gradually melted away. About all the surplus in sight today is the Bawra holdings of about 330,000,000 pounds, consisting mostly of low grade wools.

As compared with 1914, in my opinion the production of wool has decreased to the extent of at least 250,000,000 pounds. Fifty million pounds of this decrease has taken place in the United States, another 50,000,000 in South America, and the bulk of the balance of this decrease has taken place in Europe, which before the war produced more wool than any other continent.

PRODUCTION OF WOOL NEGLECTED.

I had hoped when I talked here in 1916 that the prevailing high prices for wool would stimulate and increase the production of wool, but the tremendous drop in the price of wool and mutton all over the world in 1920 bankrupted so many wool growers and discouraged so many others that all plans for increasing the production of wool and mutton were abandoned, and ewes and ewe lambs were butchered by the million, and in certain parts of the world the ewes were not bred. These conditions were especially prevalent in the United States and Argentina, where there was a market, but at low prices, for the meat. In Australasia the freezing plants were full of carcasses accumulated during the war, and the packers had no room to hang up any more, so there was comparatively no market for the mutton, and the packers simply stopped killing. Therefore, the slaughter of sheep in Australasia was on a comparatively limited scale.

Over a period of four years, one of which was a year of very small consumption, with the world having used considerably more wool than was produced in those four years, and with every prospect that during the next four years the world will require wool at a rate greater than the present rate of production, I can only feel that the price of wool will remain high. It was a great misfortune to the world that the drop from the peak prices of 1920 went so far as it did. Wool dropped to an unjustifiably low level, as evidenced by the tremendous rebound when once the low level had been reached.

If the drop in 1920 had stopped when it reached \$1 clean, for good merino wool, at 80 cents for three-eighths, and 70 cents for $\frac{1}{4}$ blood, and, say, at 50 cents for the lower grades of crossbreds, there would not, in my opinion, have ensued the great slaughter of breeding stock which took place in North and South America, and plans which had been made all over the world to increase the production of wool would have been carried out. As it was, most of those preparing to carry out such plans went into bankruptcy courts and their sheep went to the butcher.

PRICES TO STAY HIGH.

While I do not care to make any predictions as to where the price of wool is going to stabilize, whether higher or lower than to-day's price level, I do believe that the price of wool as measured by all pre-war standards, will be very high for several years to come, and that this era of high prices is bound eventually to result in a very considerable increase in the production of wool and mutton, especially in those countries which have a comparatively low cost of production. I refer especially to Australasia and South America.

I further believe that within a comparatively short space of time, regardless of any increase that may occur in the total quantity of wool produced, there will be a greatly increased production of the finer grades of crossbreds. With the vast disparity existing today between the price of the finer and lower grades of wool, it is inconceivable that the tendency of the last twenty years to breed coarser and coarser will continue.

THE CAPPER BILL ALIAS "THE WOOL WOVEN FABRIC" BILL.

IN the Senate of the United States on April 13 (calendar day April 15), 1921 Senator Capper introduced the so-called "Truth in Fabric" bill, which was read twice and referred to the Committee on Interstate Commerce. Hearings before a sub-committee, composed of Senators James E. Watson of Indiana, chairman, Bert M. Fernald of Maine, and Ellison D. Smith of South Carolina, were held in June and July, 1921. The sub-committee reported the bill to the Committee on Interstate Commerce without recommendation. On December 22, 1922, it was reported with amendments to the Senate by Senator Cummings, chairman of the Committee on Interstate Commerce. Changes or additions to the bill are indicated by italics. Parts that have been stricken out are indicated by the use of brackets. Among the changes are the insertion of the second paragraph of Section 15 and the substitution of "that contains" for "purporting to contain", "marked" for "stamped", and "reworked wool" for the term "shoddy". The definition of "shoddy" which the original bill contained in section 14 has been stricken out and the term "reworked wool" is defined as "wool that has been previously spun or woven into cloth." The title of the bill as amended is noted at the end.

A BILL.

To prevent deceit and unfair prices that result from the unrevealed presence of substitutes for virgin wool in woven fabrics purporting to contain wool and in garments or articles of apparel made therefrom, manufactured in any Territory of the United States or the District of Columbia or transported or intended to be transported in interstate or foreign commerce, and providing penalties for the violation of the provisions of this Act, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act shall be known and designated as "The [Truth in Fabric] Wool Woven Fabric Law."

SEC. 2. That every manufacturer of woven fabrics [purporting to] *that* contain wool and of garments or articles of apparel made therefrom, within any Territory of the United States or the District of Columbia, shall, before offering such fabric or garment or article of apparel for sale, trade, or exchange, or for transportation to any other State or Territory or the District of Columbia, or to any foreign country, cause the said woven fabric to be [stamped] *marked*, and all garments and articles of apparel made therefrom to be tagged in the manner hereinafter provided, and any person who shall violate any provision of this section shall be guilty of a misdemeanor, and for the first offense shall, upon conviction thereof, be fined not to exceed \$500, or shall be sentenced to one year's imprisonment, or both such fine and imprisonment, in the discretion of the court, and for each subsequent offense and conviction thereof shall be fined not less than \$1,000 or sentenced to one year's imprisonment, or both such fine and imprisonment, in the discretion of the court.

SEC. 3. That the introduction into any State or Territory or the District of Columbia from any other State or Territory or the District of Columbia, or from any foreign country, or shipment to any foreign country, of any woven fabric [purporting to contain] *that contains* wool which is not [stamped] *marked* as hereinafter provided, or of any garment or article of apparel made therefrom which is not tagged as hereinafter provided, is hereby prohibited, and any consignor thereof of any person who shall receive in any State or Territory or the District of Columbia from any other State or Territory or the District of Columbia, or any foreign country, or having so received, shall deliver in original unbroken packages, for pay or otherwise, or offer to deliver to any other person, any such fabric which is not [stamped] *marked* as hereinafter provided, or which is falsely [stamped] *marked*, or any garment or article of apparel made therefrom, which is not tagged as hereinafter provided or which is falsely tagged within the meaning of this Act, or any person who shall sell or offer to sell in any State or Territory of the United States or in the District of Columbia any such [unstamped] *unmarked* or falsely [stamped] *marked* woven fabric, or untagged or falsely tagged garment or article of apparel made therefrom, shall be guilty of a misdemeanor, and for the first offense shall be fined not exceeding \$500 or one year's imprisonment, or both, in the discretion of the court, and upon conviction for each subsequent offense shall be fined not exceeding \$1,000 or be imprisoned not exceeding one year, or both, in the discretion of the court.

SEC. 4. That the Secretary of the Treasury, the Secretary of Agriculture, and the Secretary of Commerce shall *decide the manner and method of marking fabrics and garments* and make uniform rules and regulations for carrying out the provisions of this Act, including the collection and examination of specimens of woven fabrics and garments or articles of apparel manufactured therefrom, offered for sale in any State or Territory or in the District of Columbia, or which shall be offered for sale in unbroken packages in any State or Territory or in the District of Columbia other than that in which they shall have been respectively produced or manufactured, or which shall be offered for shipment or intended for shipment in interstate or foreign commerce, or which shall be received from any other State or Territory or the District of Columbia, other than that in which they have been respectively produced or manufactured, or which shall be received from any foreign country or intended for shipment to any foreign country, and shall have power to inspect the plant, raw materials, methods, and the books of all manufacturers of such goods who have secured a registration number as hereinafter provided, and to require reports in such form from such manufacturers from time to time as they may deem necessary, under such rules and regulations as they may prescribe.

SEC. 5. That the examination of specimens of woven fabrics, and of garments and articles of apparel manufactured therefrom, shall be made in the Bureau of Chemistry of the Department of Agriculture or under the direction and supervision of such bureau or the Bureau of Standards, in the Department of Commerce, as the Secretary of the Treasury, the Secretary of Agriculture, and the Secretary of Commerce may determine, under the rules to be made by them, for the purpose of determining from such examination whether such fabrics or garments and articles of apparel manufactured therefrom are [stamped] *marked* and tagged as hereinafter provided, or are falsely [stamped] *marked* or tagged within the meaning of this Act, and if it shall appear from such examination that such fabrics or garments and articles of apparel manufactured therefrom are either [unstamped] *unmarked* or untagged or falsely [stamped] *marked* or falsely tagged within the meaning of this Act, the Secretary of Agriculture or the Secretary of Commerce, as the case may be, shall cause notice thereof to be given to the party from whom such sample was obtained. Any party so notified shall be given an opportunity to be heard, under such rules and regulations as may be prescribed as aforesaid, and if it appears that any of the provisions of this Act have been violated by

such party, then the Secretary of Agriculture or the Secretary of Commerce, as the case may be, shall certify at once the facts to the proper United States district attorney, with a copy of the results of the analysis or the examination of such fabric, or garment, or article of apparel manufactured therefrom, duly authenticated by the analyst or officer making such examination, under oath of such officer. After judgment of the court notice shall be given by publication in such manner as may be prescribed by the rules and regulations aforesaid.

SEC. 6. That it shall be the duty of each district attorney to whom the Secretary of Agriculture or the Secretary of Commerce shall report any violation of this Act to cause appropriate proceedings to be commenced and prosecuted in the proper courts of the United States without delay for the enforcement of the penalties in such case herein provided.

SEC. 7. That every manufacturer of woven fabrics [purporting to] *that* contain wool, and of garments or articles of apparel manufactured therefrom, within any State or Territory of the United States or the District of Columbia, and every such manufacturer in any State or Territory of the United States, or the District of Columbia, or in any foreign country, who offers apparel manufactured therefrom for sale, trade, or exchange in interstate commerce or for shipment from any State, Territory, or the District of Columbia to any other State, Territory, or the District of Columbia, or from any foreign country or to any foreign country, shall secure a registration number from the Secretary of Commerce of the United States, and the Secretary of Commerce is hereby given power to make rules and regulations for carrying out the provisions of this section.

SEC. 8. That the introduction into any State or Territory or the District of Columbia from any other State or Territory or the District of Columbia or from any foreign country or shipment to any foreign country of yarn [purporting to contain] *that contains* wool, or of any woven fabric [purporting to contain] *that contains* wool, or of any article of apparel made from such woven fabric [purporting to contain] *that contains* wool made by any manufacturer who has not secured a registration number as hereinbefore provided, is hereby prohibited, and any person who shall violate any provision of this section shall be guilty of a misdemeanor, and for the first offense shall be fined not exceeding \$500 or one year's imprisonment, or both, in the discretion of the court, and upon conviction for each subsequent offense shall be fined not exceeding \$1,000 or be imprisoned not exceeding one year, or both, in the discretion of the court.

SEC. 9. That every manufacturer of woven fabrics [purporting to] *that contain wool*, within any State or Territory of the United States, or the District of Columbia, and every such manufacturer in any foreign country who offers or intends to offer such fabric for sale, trade, or exchange in interstate commerce or for shipment from any State, Territory, or the District of Columbia to any other State, Territory, or the District of Columbia from any foreign country or to any foreign country, shall [stamp] *mark*, or cause to be [stamped] *marked*, [upon the back or on the selvage of every yard of] such woven fabric, in a manner that shall be legible, [* * *] the Secretary of the Treasury, the Secretary of Agriculture, and the Secretary of Commerce, *with the following information*: The contents of the fabric stating the [four following] ingredients as herein defined: Virgin wool, [shoddy] *reworked wool*, cotton, [and] silk, *or any other ingredient that is used*, and the relative proportion or percentage by weight of each, together with the registration number of the person, firm, or corporation making the fabric or cloth: *Provided*, That in stating the contents of virgin wool it shall be sufficient to recite "not less than" a stated percentage of such ingredient, and in stating the contents of [shoddy] *reworked wool*, cotton, [or] silk, *or other ingredient* it shall be sufficient to recite "not more than" a stated percentage of such ingredient or ingredients.

SEC. 10. That every manufacturer of garments and articles of apparel manufactured from woven fabric, [purporting to contain] *that contains wool*, within any State, or Territory of the United States, or the District of Columbia, and every such manufacturer in any foreign country who offers or intends to offer such garments or articles of apparel for sale, trade, or exchange, in interstate commerce or for shipment from any State, Territory, or the District of Columbia, to any other State, Territory, or the District of Columbia, or from any foreign country or to any foreign country, shall, in addition to having the woven fabric from which said garment or article of apparel is manufactured [stamped] *marked*, as hereinbefore provided, shall have sewn on such garment or article of apparel in a manner and at a place where the same will be easily discernible a [white cotton strip of cloth] *designation* on which shall be [indelibly written or printed] *stated* the precise information contained in the [stamp] *mark* on the fabric or cloth from which such garment or article of apparel was manufactured: *Provided, however*, That nothing herein shall be construed as requiring a garment manufacturer to

*In the official copy of the bill there is an apparent omission of the words "and in such form as may be prescribed by" which appear in the original bill at this point.

place any label, [or] tag, or *designation* on the finished garment to designate the contents of the linings, interlinings, paddings, stiffenings, trimmings, or facings of the garment.

SEC. 11. That every manufacturer of yarn [purporting to contain] *that contains* wool, within any State or Territory of the United States or the District of Columbia, and every such manufacturer in any State or in any foreign country who offers or intends to offer such yarn for sale, trade, or exchange in interstate commerce for pay or otherwise, or for shipment from any State, Territory, or the District of Columbia to any other State, Territory, or the District of Columbia, or from any foreign country or to any foreign country, shall secure a registration number from the Secretary of Commerce of the United States, under such rules and regulations as may be provided.

SEC. 12. That every manufacturer of yarn, [purporting to contain] *that contains* wool, within any State or Territory of the United States or the District of Columbia, and every such manufacturer in any State or in any foreign country who offers or intends to offer such yarn for sale, trade, or exchange in interstate commerce, for pay or otherwise, or for shipment from any State, Territory, or the District of Columbia to any other State, Territory, or the District of Columbia, or from any foreign country or to any foreign country, shall, at the time he sells or offers to sell, or ships or offers to ship in interstate or foreign commerce such yarn, furnish to the purchaser a statement in writing which shall set forth the contents of such yarn, whether the same contains virgin wool, [shoddy], *reworked wool*, cotton, [or] silk, or *other ingredients* as hereinbefore defined, and the proportion and percentage *by weight* of each of such ingredients, together with a guaranty in writing that the said information so furnished is correct, and every manufacturer of woven fabrics in any State or Territory of the United States or the District of Columbia, and every such manufacturer in any foreign country who purchases or secures yarn from sources other than his own manufacturing plant, and who intends to use such yarn in the manufacture of woven fabrics, for sale, trade, or exchange in interstate commerce, or for shipment from any State, Territory, or the District of Columbia to any other State, Territory, or the District of Columbia, or to any foreign country, shall secure such written guaranty from such yarn manufacturer, and any violation of this section by any person shall be a misdemeanor, and upon conviction thereof, for the first offense shall be punishable by a fine of not more than \$500, or one year's imprisonment, or both such fine and imprisonment, in the discretion of the

court, and for each subsequent offense shall be punishable by a fine of not more than \$1,000 or one year's imprisonment, or both such fine and imprisonment, in the discretion of the court.

SEC. 13. That yarn [purporting to contain] *that contains* wool, woven fabrics [purporting to] *that contain* wool, and garments or articles of apparel made therefrom, which are being imported into the United States or offered for import, shall, in addition to the other requirements of this Act, be accompanied by a written statement of the manufacturer thereof which shall set forth the contents of such yarn, woven fabrics, garments, and articles of apparel made therefrom, stating whether the same contains virgin wool, [shoddy] *reworked wool*, cotton, [or] silk, *or other ingredients* as hereinbefore defined and the percentage *by weight* of such ingredients, together with a guaranty in writing that the said information so furnished is correct; and in case such written statement and guaranty is not furnished, said yarn, woven fabrics, garments, and articles of apparel made therefrom shall be refused admission to the United States, and the Secretary of the Treasury shall refuse delivery thereof to the consignee, and cause the destruction of any such goods refused delivery, which shall not be exported by the consignee within three months from the date of notice of such refusal, under such rules and regulations as the Secretary of the Treasury may prescribe.

SEC. 14. That the term "virgin wool," as used in this Act, shall mean wool that has never previously been spun, or woven into cloth; the term ["shoddy"] shall include any material obtained from any fabric or clippings of cloth of any fiber whatever, or secured from rags or from used apparel of any description, or any fiber that has been previously spun, or woven into cloth, as well as wood, hemp, jute, flax, and hair fiber not properly classed as wool of any description and from whatever source obtained; also fur, feathers of every description and from whatever source obtained] *"reworked wool" shall mean wool that has been previously spun or woven into cloth.* The term "cotton" shall mean cotton fiber that has never been previously spun, or woven into cloth, and the term "silk" shall mean silk fiber, the product of the silkworm, that has never been previously spun, or woven into cloth. The term "Territory" shall include the insular possessions of the United States. The word "person" shall be construed to import both the plural and the singular, as the case demands, and shall include corporations, partnerships, companies, societies, and associations. When construing and enforcing the provisions of this Act the act, omission, or failure of any officer, agent, or other

person acting for or employed by any corporation, partnership, company, society, or association, within the scope of his employment or office, shall also be deemed in every case to be the act, omission, or failure of such corporation, partnership, company, society, or association as well as that of the person.

SEC. 15. That no retail dealer shall be prosecuted under the provisions of this Act for having in his possession goods not [stamped] *marked* or tagged or falsely [stamped] *marked* or tagged within the meaning of this Act, when he can establish a guaranty signed by the wholesaler, jobber, or manufacturer, or other party residing in the United States from whom he purchased such goods found in his possession, that such goods are truthfully [stamped] *marked* or tagged in conformity with the provisions of this Act. Said guaranty, to afford protection, shall contain the name and address of the party or parties making the sale of such articles to such dealer, and in such case said party or parties shall be amenable to the prosecutions, fines, and other penalties which would attach in due course to the dealer under the provision of this Act.

That no wholesaler, jobber, or manufacturer shall be prosecuted under the provisions of this Act for having in his possession goods falsely marked or tagged within the meaning of this Act when he can establish a guaranty signed by the wholesaler or manufacturer or other party residing in the United States from whom he purchased such goods found in his possession; that such goods are truthfully marked or tagged in conformity with the provisions of this Act. Said guaranty to afford protection shall contain the name and address of the party or parties making the sale of such articles to such wholesaler, jobber, or manufacturer, and in such case said party or parties shall be amenable to the prosecutions, fines, and other penalties which would attach in due course to the wholesaler, jobber, or manufacturer under the provisions of this Act. That no fabric manufacturer shall be prosecuted under the provisions of this Act for having in his possession goods falsely marked or tagged within the meaning of this Act when he can establish a guaranty or guaranties signed by the yarn manufacturer or manufacturers or other party or parties residing in the United States from whom he purchased such yarn from which such goods are made, that content of such yarn is as stated by said fabric manufacturer on mark or tag which he has placed on said goods in conformity with the provisions of this Act. Said guaranty to afford protection shall contain the name and address of the party or parties making the sale of such yarn to such fabric manufacturer, and in no such case said party or parties shall be amenable to the prosecutions, fines, and other penalties which would attach in due course to

the fabric manufacturer under the provision of this Act.

SEC. 16. That any woven fabric or garment or article of apparel manufactured therefrom that is not [stamped] *marked* or tagged in accordance with the provisions of this Act or that is falsely [stamped] *marked* or tagged within the meaning of this Act, and is being transported from one State, Territory, District of Columbia, or insular possession, to another for sale, or having been transported remains unloaded, or in original unbroken packages, or if it be sold or offered for sale in any State or Territory of the United States, or the District of Columbia, or if it be imported from a foreign country, or if it be intended for export to a foreign country, shall be liable to be proceeded against in any district court within the district where the same is found and seized for confiscation by a process of libel for condemnation, and if such woven fabric or garment or article of apparel manufactured therefrom is condemned as either not [stamped] *marked* or tagged within the meaning of this Act, or falsely [stamped] *marked* or tagged within the meaning of this Act, the same shall be disposed of by sale as the said court may direct, and the proceeds thereof, if sold, less the legal costs and charges, shall be paid into the Treasury of the United States, but such goods shall not be sold in any jurisdiction contrary to the provisions of this Act: *Provided, however,* That upon the payment of the costs of such libel proceedings and the execution and delivery of good and sufficient bond to the effect that such woven fabric or garments or articles of apparel manufactured therefrom shall not be sold or otherwise disposed of contrary to the provisions of this Act, the court may by order direct that such articles be delivered to the owner thereof. The proceedings of such libel cases shall conform as nearly as may be to the proceedings in admiralty, except that either party may demand trial by jury of any issue of fact joined in any such cases, and all such proceedings shall be at the suit of and in the name of the United States.

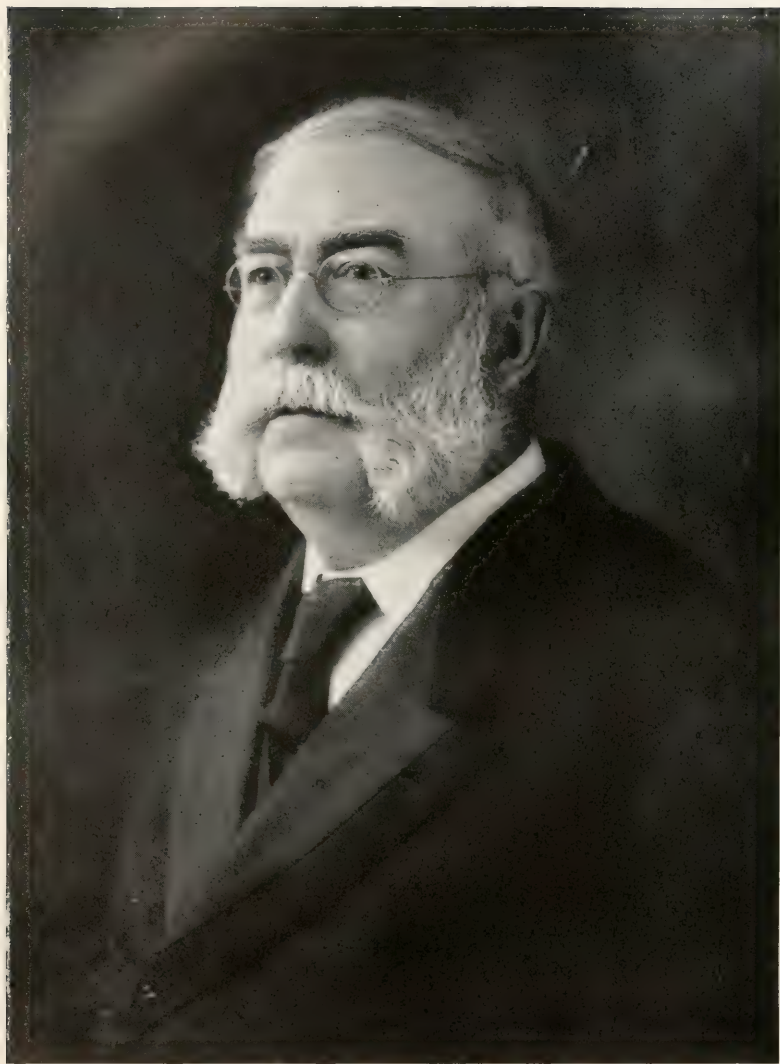
SEC. 17. That the Secretary of the Treasury shall deliver to the Secretary of Agriculture or Secretary of Commerce, as the case may be, upon his request from time to time, samples of woven fabrics and garments and articles of apparel manufactured therefrom, which are being imported into the United States or offered for import, giving notice to the owner thereof or consignee, who may appear before the Secretary of Agriculture, or the Secretary of Commerce, as the case may be, and have the right to introduce testimony. And if it appear from the examination of such sample that any woven fabric, garment, or article of apparel manufactured therefrom, offered to be imported into the United States, is either

not [stamped] *marked* or tagged, or is falsely [stamped] *marked* or tagged within the meaning of this Act, or is otherwise falsely labeled in any respect, said woven fabric, garment, or article of apparel manufactured therefrom shall be refused admission and the Secretary of the Treasury shall refuse delivery to the consignee, and shall cause to be sold, after being properly [stamped] *marked* or tagged, any goods refused delivery which shall not be exported by the consignee within three months of the date of notice of such refusal, under such regulations as the Secretary of the Treasury may prescribe: *Provided*, That the Secretary of the Treasury may deliver to the consignee such woven fabric or garments or articles of apparel manufactured therefrom, pending examination and decision in the matter, upon the execution of a penal bond for the amount of the full invoice value of such woven fabric, or garments, or articles of apparel manufactured therefrom, together with the duty thereon, and on the refusal to return such goods for any cause to the custody of the Secretary of the Treasury when demanded for the purpose of excluding them from the country or for any other purpose, said consignee shall forfeit the full amount of the bond: *And provided further*, That all charges for storage, cartage, and labor on goods which are refused admission or delivery shall be paid by the owner or consignee, and in default of such payments shall constitute a lien against any future importations made by such owner or consignee.

SEC. 18. That the Secretary of the Treasury, the Secretary of Agriculture, and the Secretary of Commerce, under such rules and regulations as they may prescribe, may cancel the registration number of any manufacturer of yarn [purporting to contain] *that contains* wool, of woven fabric [purporting to contain] *that contains* wool, or of garments or articles of apparel manufactured therefrom, who has previously obtained a registration number under the provisions of this Act or may refuse a registration number to any such manufacturer who applies for a registration number who refuses or neglects to comply with any of the provisions of this Act or who has been convicted of a violation of any of the provisions thereof.

SEC. 19. That this Act shall be in force and effect from and after six months after it shall become a law, as applied to manufacturers, importers, dealers, or other persons mentioned herein, when manufacturing, importing, or dealing in woven fabric and garments or articles of apparel manufactured from such fabric, or imported into the United States after that date.

Amend the title so as to read: "A bill to prevent deceit and unfair prices that result from the unrevealed presence of substitutes for virgin wool in woven fabrics that contain wool and in garments or articles of apparel made therefrom, manufactured in any Territory of the United States or the District of Columbia or transported or intended to be transported in interstate or foreign commerce and providing penalties for the violation of the provisions of this Act, and for other purposes."



CHARLES F. AVERY

Obituary.

CHARLES F. AVERY.

WHEN CHARLES F. AVERY, surviving member of the firm of Mauger & Avery died suddenly in his seventy-sixth year in Newark, New Jersey, on December 5, 1922, the Boston Wool Trade lost one of the oldest and most respected men in it.

Mr. Avery went to Montclair, New Jersey, for a short visit over Thanksgiving Day with his daughter, Mrs. Frederick H. Blake. He was in New York on the above mentioned date, attending to some business matters and calling upon bank officials to discuss the business situation. After writing to his business associates a long and lucid letter giving his impressions of it he went to Newark to visit a friend, and as he was going up the steps leading to his friend's home, he drew a deep breath, as if in distress and died shortly thereafter, heart trouble being thought to have caused death.

Mr. Avery was born in New York City on March 25, 1847, his father, Elisha Avery, being a teacher and closely identified with educational interests of the city. The son was trained in the public grammar schools, and in March 1861, at the early age of fourteen years went with Walter Brown & Company, a prominent firm in the wool business of New York. On January 1, 1873 Mr. Avery and his friend, Nicholas Mauger, who had learned the wool business with Smythe & Lynch, another firm in the wool trade in New York, decided to leave the firm of Walter Brown & Company, of which they were the practical managers, and organize the firm of Mauger and Avery which opened offices in New York and Boston and later was to become one of the best known firms in the two cities.

Mr. William Price, who later was the wool buyer for the Arlington Mills for twenty-five years and whose retirement as such occurred on January 1, 1922, was placed in charge of the Boston office in 1878, remaining as its manager until November 1884, when Mr. Avery came to Boston, establishing himself in Newton until 1885, when he purchased the home in Newtonville in which he lived the remainder of his life. At that time seeing that Boston was the great wool market of the country, the firm made Boston its principal place of business, Mr. Avery being followed later by his partner, Mr. Mauger, at which time the New York office was discontinued. At first the members of the young firm were wool brokers, but later became among the earliest merchants who imported foreign wools.

The original partners remained together under the name of Mauger & Avery until December 31, 1905, when Mr. Mauger retired and Mr. Avery continued the business alone until his death, buying and selling on a large scale both domestic and foreign wool, but specializing in the latter.

The members of the firm were early recognized as authorities in wool matters, in 1892 being requested by the Senate Finance Committee to prepare a report showing the effect of the domestic tariff on the price of wools.

Since the December issue of 1892 when they were first printed, Mauger and Avery have written the text and prepared the tables of prices for foreign wools for the Quarterly Reports of the Boston Wool Market which have regularly appeared in this Bulletin and which have been recognized as accurate and authentic. In 1891 Mr. Avery prepared for this Bulletin a carefully compiled list of important events and statistics affecting the value of wool in the United States and Europe from 1866 to 1890. In that same year it was stated that the prices of Ohio wools had been annually furnished to the United States government by Mauger & Avery for twenty-five years, a work which has been continued to the present time.

While Mr. Avery was devoted to his business, seldom taking a vacation, he gave time to civic and religious bodies, taking great interest in the affairs of St. John's Episcopal Church of Newtonville and serving the city of Newton as a member of the school board from 1895 to 1900 and as alderman from 1908 to 1911.

He was a member of the Brae Burn Country Club, the Newton Club, and of the Albermarle Golf Club of Newton, being its second president, and also belonged to the Boston Art Club, The Boston Art Museum, The Bostonian Society, and the Metropolitan Museum of Fine Arts of New York City. Mr. Avery was one of the early sponsors for the Boston Wool Trade in whose affairs he took an active interest and of which he was the fourth president, serving from 1915 to 1916. During the war he was chairman of the Wool Trade Committee in charge of Government bond subscriptions, and it was largely through his persistent and well conceived efforts that the trade subscribed so heavily for all issues.

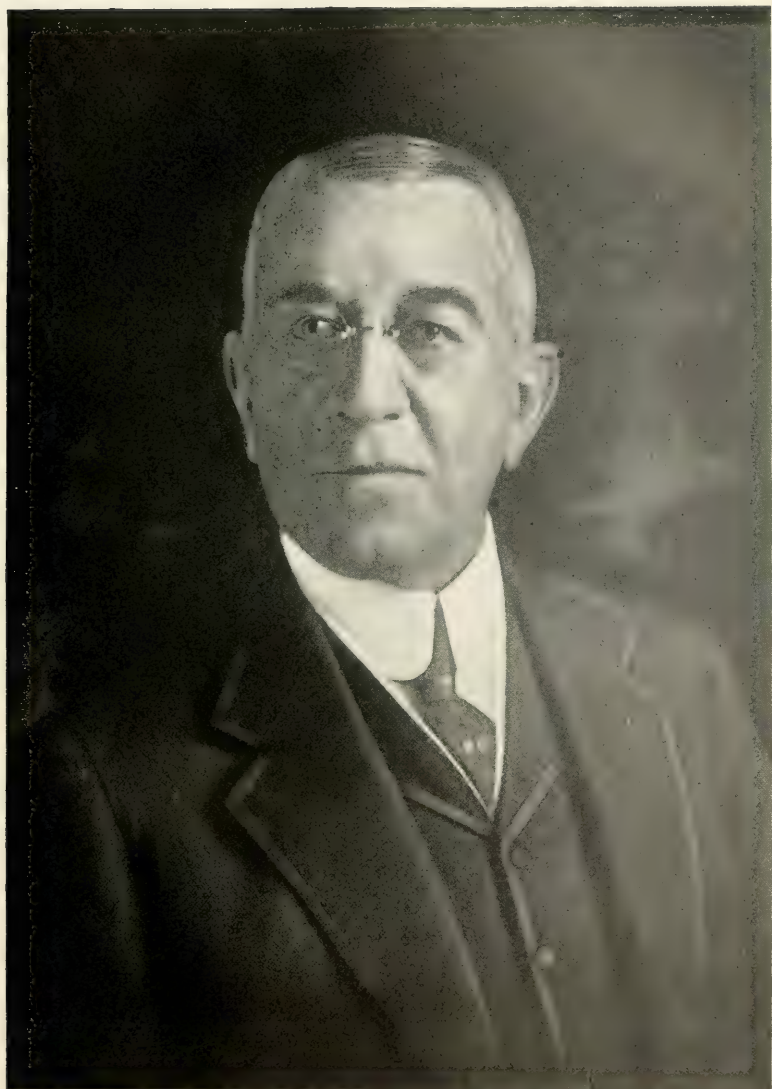
At the time of his death and for some years previous, Mr. Avery was considered the dean of the wool trade and its grand old man. His business ideals were of the highest type and his reputation for fair dealing was unsurpassed in the trade.

He is survived by two daughters: Mrs. Frederick H. Blake of Montclair, New Jersey, and Miss Gladys Avery who lived with her father, and one son, Mr. Elisha L. Avery of Newtonville, who was associated with his father in business. Mrs. Avery, who was Miss Florence Topping of Brooklyn, New York, died in 1907.

The funeral services conducted by the Rev. Richard T. Loring, rector of St. John's Episcopal Church, were simple, in conformity with Mr. Avery's wishes, and were attended by representative men from the Wool Trade Association and branches of the textile trade. Flags were at half mast in the Trade district and offices were closed as a mark of respect from two to three o'clock during the services.

CHARLES H. HUTCHINS.

MR. CHARLES HENRY HUTCHINS, chairman of the board of directors of the Crompton & Knowles Loom Works, Worcester, Massachusetts and former president of the company, died in his seventy-sixth year at his home in Shrewsbury, Mass. on November 15th after having been stricken with an attack of paralysis a few days previous.



CHARLES H. HUTCHINS

Mr. Hutchins was born in East Douglas, Mass. on January 13, 1847, the son of Charles and Harriet N. (Hunt) Hutchins. After being graduated from the primary and high schools of his native place, he entered the Douglas Axe Works, conducted by his father. While a school boy he spent much time in the works and later obtained a position in them as a mechanic, but after two years in that work he became a clerk, at the age of eighteen years in the general store of the village, going two years later to Worcester as a salesman in the dry goods store of Horace Sheldon & Company, where he got a training which he always felt had a marked influence upon his subsequent career.

In 1874 he began under the firm name of C. H. Hutchins & Co., the manufacture of tape, webbing, and other narrow fabrics in a building in which L. J. Knowles & Brother, loom manufacturers, had their shop. Later this business was incorporated as The Hutchins Narrow Fabric Company and prospered. In 1884 when Lucius J. Knowles died, his brother and surviving partner, Francis B. Knowles, not being in robust health and feeling keenly the loss of his brother to whom he was bound by the strongest ties of affection and love, realized that he needed assistance in the conduct of the expanding loom business. The business of Charles H. Hutchins & Co., was prospering also, and in addition Mr. Hutchins was also manufacturing woolen goods. He was loth at first, therefore, to accept an invitation from Mr. Knowles, whose son-in-law he was, to become associated in the Loom Works; but realizing that Mr. Knowles was not well and needed his help, he responded to the call, sold his own business, and threw himself with characteristic energy into the new work, relieving Mr. Knowles greatly in the task of introducing the Knowles loom into the country's mills against strenuous competition. A brother of Mr. Hutchins, George F. Hutchins, who had entered the employ of the Knowles Works seven years previous, was superintendent and successor of Lucius J. Knowles in the designing and perfecting of the looms. The business was incorporated in 1885 as The Knowles Loom Works, Mr. Knowles being president and Mr. Charles H. Hutchins, treasurer. Upon the death of Mr. Knowles five years later, Mr. Hutchins succeeded him as president, remaining as such for the Crompton & Knowles Loom Works, after the merger with the Crompton Loom Works until his retirement from active business in February, 1917.

Mr. Hutchins entered upon the manufacture of looms at a most opportune time, when the demand by American manufacturers for looms to weave fancy fabrics was large and insistent, and he rose fully to the rare opportunity offered, developing their manufacture to a high degree and the business on wider lines than ever before. In 1890 it became necessary to increase their capacity and a large new building was erected, the first of a great group. Three years later The George W. Stafford Manufacturing Company of Providence, R. I., at present the Company's Providence works, was purchased.

For a number of years the two companies, The Crompton Loom Works and The Knowles Loom Works, both situated in Worcester, had been keen rivals and competitors in their respective fields, the Crompton Loom Works building the closed shed type of loom and The Knowles

Loom Works, the open shed type. The logical and inevitable thing happened in March, 1907 when the two companies were consolidated, Mr. Hutchins thereby becoming the head of the greatest fancy loom company in the country, if not in the world, which under his guidance continued to develop and expand along conservative lines.

From the time of its organization in 1898, when ten large envelope manufacturing companies were merged into the United States Envelope Company, Mr. Hutchins was its president. He was a former president of the Worcester Chamber of Commerce, a director of The Worcester Bank and Trust Company, and one of the vice-presidents of the Peoples Savings Bank. He was a former president of the Congregational Club of Worcester and the Home Market Club of Boston, a member of the Union League Club of New York, of the Worcester Club, The Worcester Country Club, and the Worcester Economic Club.

Notwithstanding his many business interests, Mr. Hutchins found time to give to church and worthy charitable organizations, being one of the founders of the Hospital Cottages for Children at Baldwinsville, and for some years president of the corporation. For nearly 50 years he was on the standing committee of the Piedmont Congregational Church of Worcester in whose affairs he was active and generous. He was a trustee of the Home for Aged Men and the Home for Aged Women, and a charter member of the City Missionary Society.

Mr. Hutchins was married twice, his first wife being Miss Eliza Evaline Knowles who died in 1898, and his second wife, whom he married in Kingston, Ontario, was Miss Laura Nicolle. He is survived by his widow, his brother, George F. Hutchins, and by Arthur Knowles Hutchins, a son by his first marriage, and a daughter, Helen Mabel, widow of the late Albert L. Stratton.

FRANCIS H. MANNING.

ON October 31, 1922, after a short illness from angina pectoris, Francis Henry Manning, a retired wool merchant who had been prominently connected with the Boston wool trade and highly respected by its members, died in his home at 129 Commonwealth Avenue, where he lived in recent years with his sister, Miss Abby F. Manning.

Mr. Manning was born in Otis Place, Boston, in 1847, the son of Francis Cogswell and Abby (Howard) Manning. His grandfather, Captain Richard Manning, was superintendent of one of the country's earliest woolen mills which was erected in Ipswich in 1794 by Richard Manning's father, Dr. John Manning, a prominent physician of Ipswich, who, as a member, petitioned the General Court to pay him out of the proceeds of the State Lottery £1200 or £1500 of the sum for which he held Government securities, and with which he wished to pay for the erection of a woolen mill to give employment to the inhabitants of the town "to their great advantage."

Captain Richard Manning's son, Francis Cogswell Manning and father of the subject of this sketch, came as a young man to Boston to seek his



FRANCIS HENRY MANNING
(As a Young Man.)

fortune in business. In 1833 he was a member of the firm of Manning & Company, composed of Francis C. and Joseph Manning, Jr., who dealt in West India goods. This firm continued with changes until 1863, when Mr. Manning retired and during the years 1863, 1864, and 1865 he was a merchant on his own account at 11 Central Wharf and 12 India Street. In 1866 he was invited by Andrew M. Howland and Matthew Luce, the latter being a partner in Livermore, Morse, & Company, to join them in the wool business under the name of Manning, Howland, & Luce, with whom he continued as senior partner until his death on January 11, 1869.

His son, Francis Henry Manning, was educated in private schools and the English High School. Not wishing a collegiate education, he went, upon his graduation from the High School, with the firm of J. C. Burrage & Company, merchants of Boston, and at the age of nineteen he began to sell woolens to the trade. After gaining an insight into business methods on the distribution end and having attained his majority, he entered the firm of which his father was senior partner, on January 1, 1869 as a junior partner, only to be shocked on the eleventh of the month by the sudden death of his father after an operation. This untoward event caused a readjustment of the partnership in which Mr. Francis C. Manning left capital, and the firm's name was changed to Howland, Luce, & Company, with Francis H. Manning and Edward Steese as the junior partners. In that same year Mr. Manning traveled in Ohio, Michigan, Wisconsin, Missouri, Kentucky, and Tennessee, soliciting wool consignments to his firm. In 1870 he went as far west as Denver. The firm of Howland, Luce, & Company continued until January 1, 1879, when two concerns were formed by the members of the old organization, Mr. Howland carrying on business under the name of A. M. Howland & Co., and Mr. Luce and Mr. Manning forming the firm of Luce & Manning. The former was continued for only a year or so when Mr. Howland retired, while the latter continued unchanged until 1898, when Matthew Luce, Jr. was admitted to the firm with no change in the name. In 1902 Matthew Luce, Sr. died and the business was continued under the same name by his son and Mr. Manning. Two years later Lesly J. Johnson was admitted to the firm, the same name being continued until Mr. Manning's retirement from business on October 1, 1914.

After his retirement he became greatly interested in the Robert B. Brigham Hospital for Incurables, of which he was a trustee and vice-president, and in the Bostonian Society, of which he was vice-president and in which his bent for the old historical Boston had free play. At the headquarters of this society in the Old State House he spent a portion of each day helping along the work of preserving the old landmarks of the historic Boston he loved. He retained his interest in the English High School, seldom missing a winter meeting or summer outing of the Old School Boys Association. Relinquishing membership in numerous clubs with which he had been connected, he continued as a member of the Boston Athletic Association and the Union Boat Club of which he was one of the oldest members.

In 1870 Mr. Manning married Charlotte Barrett, a daughter of the late Judge Vose of the Superior Court of Massachusetts. For many years he

and his family spent the winters in their home on Beacon Street and the summers at Cohasset, but after the death of his wife in 1900 and his daughter and only child, Margaret Anistice, in 1911, he gave up the home and went to live at 129 Commonwealth Avenue, with his sister, Miss Abby F. Manning who, with another sister, Mrs. George S. Selfridge survives him.

Socially Mr. Manning was genial, of a happy disposition, courteous, and helpful, and in his business dealings, a man of integrity—a fine type of the Boston wool merchant. Upon recommendation of the Wool Trade Association, offices in the wool district were closed as a mark of respect during the funeral services, which were conducted at Mount Auburn Chapel by the Rev. Elwood Worcester, D. D., rector of Emmanuel Episcopal Church, which Mr. Manning attended.

MATTHEW J. WHITTALL.

ON October 31, 1922, after an illness extending over six weeks, Mr. Matthew John Whittall, head of the Whittall Carpet Mills, died at his home in Shrewsbury, near Worcester, Massachusetts, in his eightieth year.

On May 10, 1843 he was born in Kidderminster, the carpet weaving center of England, the son of Eli and Elisa Whittall. His father was a weaver, and at the age of fourteen the lad began his industrial career with the Messrs. Humphries, carpet manufacturers of his native town. His progress in the trade was rapid, becoming when he was twenty-one years old superintendent of the mills of T. B. Worth, in Stourport, a position he resigned a few years later to become manager of the Severn Valley Carpet Works of Fawcett & Spurway.

In 1871 he was persuaded by the late George Crompton of Worcester, Massachusetts, to leave his native country and come to Worcester as superintendent of the Crompton Carpet Mills which had just been organized, a position he held until Mr. Crompton decided in 1879 to give up the carpet manufacture and devote himself to the making of weaving machinery, the carpet mills being sold to William J. Hogg and the Packachoag Spinning Mills being retained by Mr. Crompton.

Deciding to go into business on his own account, Mr. Whittall went to England, and upon his return the following year brought with him eight Crossley carpet looms, which were set up in a leased, small one-story frame building, the plant being called The Stillwater Mills. This was the forerunner of the present splendid Whittall Mills whose products are so well known throughout the country. The care and attention he paid to the products of his mill, seeing, himself, every yard of carpet before it was shipped, were characteristic of the thoroughness with which he established his reputation for the quality of his product.

His business prospered, so that by 1884 the looms numbered forty-two. Meanwhile Mr. Whittall purchased the site of the Packachoag Spinning Mills which had been destroyed by fire and erected the Edgeworth Spinning Mills operated ever since in co-partnership with Alfred Thomas, who had joined him in this country in 1880. In 1889 he erected Whittall Mill No. 2, and in 1891, besides building Mill No. 3, purchased the Palmer Carpet



MATTHEW J. WHITTALL

Company's plant at Palmer with twenty-four looms and employing one hundred operatives. In 1901 the Worcester Carpet Mills, consisting of the original Crompton Mills and all the buildings which had been added, were bought from William J. Hogg. In 1903, the capacity of the old Crompton Mills was doubled and a year later a fine brick dye house, together with a central power station, was constructed to distribute power to the entire works.

Enlargements continued until in 1906 the business had grown to such proportions that the Whittall Associates was organized, of which Matthew J. Whittall was president and treasurer, and his son, Matthew P. Whittall, assistant treasurer. Early in 1916, the plant of the Cochrane Manufacturing Company at East Dedham was purchased. The old carpet looms were discarded to make room for spinning machinery, later used entirely for war work. In it were spun thousands of pounds of knitting yarns for Red Cross and other branches of war service.

After fifty years of connection with our domestic industry, Mr. Whittall, who had come to this country with few assets except his knowledge of the carpet manufacture, his fine character, and his ambition, was the owner of the largest carpet mills in the world owned by individuals which manufactured exclusively high grade carpets and rugs, the mills covering more than a half million square feet of floor space, containing three hundred looms, and employing approximately two thousand people.

Mr. Whittall's business life was one of unbroken success, achieved by indomitable perseverance which could not be denied, a business integrity which insisted that nothing but the best product should come from his looms, and a generous, human character which recognized the rights of his fellow-workers and won their respect and co-operation.

It was a rare occurrence in the country's business world when on November 2, 1921 in commemoration of the fiftieth anniversary of the founding of his business, a gold tablet was presented to Mr. Whittall at his Fifth Avenue show-room by his many customers from all parts of the country, as an expression of their affection for him and in appreciation of his unfailing fair-dealing. The gift was intended, the presentation speaker said, to commemorate the fiftieth anniversary of Mr. Whittall's association with the carpet industry of the United States and perpetuate forever the character and reputation earned by him and his products.

Mr. Whittall was a religious man and a regular attendant upon the services of his church, being a member of St. Matthews Episcopal Church of Worcester. He was an officer of the parish from the time it was created in May 1874 until his death. After the original church was destroyed by fire, Mr. Whittall gave to the parish, which was largely composed of his employees, a new church building in 1894.

At the beginning of the war he desired to build a chapel for St. Mary's parish in Kidderminster, England, his boyhood home, but the realization of his desire was deferred until hostilities had ceased. In the spring of 1922, he made his last trip to his old home to be present with Mrs. Whittall and his grandson, Matthew Whittall, on Easter Sunday at the

dedicatory services. In presenting this beautiful chapel erected through his generosity and named in his honor, "The Whittall Chapel", he stated that he had no hesitancy in giving the money for that purpose, for all that he had in the world was acquired in fair competition and honest dealing, and he said: "God has been good to me all my life. He has blessed me with good health, a loving family, many friends, and much prosperity. I have given this chapel as a thank offering for all His loving kindness to me and mine."

He took a keen interest in the Worcester Boys' Club, the Whittall Hall being named in his honor because of the financial and personal effort he made on its behalf. He also made gifts to the Worcester Masonic Temple, the Y. M. C. A., Memorial Hospital, and St. Vincent Hospital. Likewise he was interested in many clubs, being a member of the Worcester Club, at one time president of the Tatnuck Country Club, and at the time of his death president of the Worcester Country Club. He was also a member of the Episcopal Clubs of Worcester and Boston, and interested in the Worcester Art Museum, and the public library.

On October 3, 1868 Mr. Whittall married at Stourport, England, where he was then employed, Ellen, youngest daughter of Henry and Mary (Grout) Paget, who died November 25, 1895, leaving to survive her a son, Matthew Percival Whittall, and a daughter, Edgeworth Paget Whittall, now the wife of James E. Whittin of Uxbridge, Massachusetts. In 1906 Mr. Whittall married Miss Gertrude Clarke, only daughter of the Hon. and Mrs. Henry T. Clarke of Omaha, Nebraska, who survives him.

Mr. Whittall's business activities were not limited to his own industry. At various times he was a director and guiding spirit in many Worcester industrial and financial organizations. He had been interested in the Skinner Church Organ Company, and identified with the Peoples Savings Bank, the Worcester Chamber of Commerce, and was President of the American Car Sprinkler Company and the Hassam Paving Company, as well as the Millbury Water Company. At the time of his death he was Vice-president of the Blakeslee Motor Car Company of which he was an organizer, a director for ten years of The Worcester City Hospital, a director of the Worcester Manufacturers Mutual Insurance Company, with which he was identified for twenty-seven years, a director of the State Mutual Life Assurance Company of Worcester, the Worcester Electric Light Company, the Worcester Bank and Trust Company, and of the Worcester Musical Association, and vice-president of the Wilton and Brussels Manufacturers' Association of America.

Simply to recount the business connections and achievements of Mr. Whittall would give an altogether inadequate and incomplete impression of the qualities of the man which endeared him to his friends and won the respect and esteem of his fellow citizens. He was regarded as a man of the highest type of business integrity, whose honesty of purpose knew no turning and whose personality radiated geniality and made him beloved by all who knew him. It will not be as a successful manufacturer alone that Mr. Whittall will be remembered, but as a man unspoiled by success, simple in his manner, friendly in his disposition, not only generous with

his money, but willing to place his time and experience at the service of every good cause—a man to be depended upon under all circumstances and on every occasion—an ideal citizen.

JAMES BUTTERWORTH.

JAMES BUTTERWORTH, former president of the H. W. Butterworth & Sons Company, manufacturers of textile finishing machinery, died at his home in Philadelphia on November 14th after a short illness. He was in his eighty-third year, having been born in 1840 in Philadelphia, in which city he lived his business life.

He was the son of Henry W. Butterworth, a son of John Butterworth who founded the business in 1820, more than a century ago. Attending the public schools, he was graduated from the Central High School and soon thereafter became associated with the business founded by his grandfather, of which his father was then the head. On his admission to the firm in 1867 its name was changed to H. W. Butterworth & Son and to H. W. Butterworth & Sons, when the two brothers of James Butterworth, Charles C. and William B. Butterworth, were admitted to the firm in 1873. Upon the death of his father, Henry W. Butterworth, in 1881, James Butterworth became the head of the firm and under his able guidance the business prospered so that larger quarters became a necessity in 1870. In 1889 the firm organization was abandoned and the business was incorporated under the name of the H. W. Butterworth & Sons Company, with James Butterworth as president. In this position he continued for sixteen years, until 1905 when he retired, being succeeded by his son, Harry W. Butterworth, although he continued to take an active part as a director in the company's affairs. Two other sons, Albert W. Butterworth and J. Warner Butterworth, are vice-presidents of the company.

Mr. Butterworth was interested in and one of the supporters, along with Theodore C. Search, William Wood and others, of the Philadelphia Textile School. For many years he, as a representative of the Commonwealth of Pennsylvania, was a member of the board of directors and at the time of his death was treasurer of the Pennsylvania Museum and School of Industrial Art, of which the Philadelphia Textile School is a part. He was a member of the Union League and was one of its vice-presidents in 1889. In 1907 he was appointed a member of the Board of Education of Philadelphia. He was also a member of the Manufacturers Club, a trustee of the Pennsylvania Mutual Life Insurance Company, and a director of the Fire Association of Philadelphia. Mr. Butterworth was also a member of the Second Baptist Church with which he was connected for sixty-six years. In addition to his three sons, he is survived by a daughter, Miss Elizabeth W. Butterworth, his wife having died in 1903.

SAMUEL HIRD.

SAMUEL HIRD, for twenty years president of Samuel Hird and Sons, manufacturers of men's worsteds, with a large plant in Garfield, New Jersey, died suddenly in his seventy-third year on December 11, 1922 from heart disease at his home in Passaic.

He was born in Harden, England, and soon became interested in the wool manufacture and worked at it. After attending the primary schools and the classes of the Bradford Philosophical Society, he took courses in the British School of Chemistry connected with Thornton Mechanics Institute. Obligated to go to work early in life, he attended night schools and won many prizes, among them the Queen's prize, for excellence in chemistry.

In October 1870 Mr. Hird came to this country and for several years held various positions in different textile mills, for a time traveling in Europe as a buyer for William D'Oiler & Company of Philadelphia. In 1873 he began to manufacture on his own account and in 1897, upon the death of James Roberts, owner of the Roberts Ford Worsted Mills in Garfield, Mr. Hird leased the plant, five years later purchasing it and changing the name to Samuel Hird & Sons. The business prospered under his guidance, the plant increasing from one with seventy-two looms and eighty employes to one with three hundred looms, 15,000 spindles and 700 employes. Mr. Hird and his five sons were in complete control of the business, S. Ainsworth Hird being treasurer, and Henry E. Hird, secretary, while John A. Hird is in the mill office and Lewis A. and Ralph C. Hird are in charge of the New York office.

Mr. Hird had an unusual experience in being able to run his plant without interruptions, on full time with full working forces, for the past fifteen years. Such friendly relations were maintained with the employes that no strike or labor disturbance, even during the bitter strikes of 1912 and 1919, disturbed the continuity of the mill's output.

Mr. Hird was a generous contributor to church and boys' work, charities, and any undertaking for the community's good, being regarded as one of Passaic's liberal benefactors.

He served two terms as a member of the Passaic Board of Education, was governor of the Passaic General Hospital and Passaic Young Men's Christian Association, and a director of the Passaic National Bank and Trust Company.

He was married twice, his first wife, Selina Ainsworth, dying in 1918. In October 1920 he married Miss Marie L. Barraclough of Thornton, England. She survives him, together with three daughters, Mrs. Henry G. Mertens and the Misses Mary E. and Martha Hird, and five sons by the first marriage, S. Ainsworth, Henry E., Lewis A., Ralph C., and John A. Hird.

Editorial and Industrial Miscellany.

PROCEDURE UNDER THE ELASTIC CLAUSE OF THE TARIFF ACT OF 1922.

By the Tariff Act of 1922 representatives of domestic industries may become participants in proceedings to establish and apply the proper duty classifications to imported merchandise. An Executive order and rules of procedure before the United States Tariff Commission under Section 315, 316, and 317 of Title III of the Tariff Act have been issued and are printed herewith:

EXECUTIVE ORDER.

It is ordered, that all requests, applications, or petitions for action or relief under the provisions of Sections 315, 316, and 317 of Title III of the Tariff Act approved September 21, 1922, shall be filed with or referred to the United States Tariff Commission for consideration and for such investigation as shall be in accordance with law and the public interest, under rules and regulations to be prescribed by such Commission.

Warren G. Harding

The White House
October 7, 1922.

APPLICATION FOR INVESTIGATION.

Application for an investigation under Section 315, 316, or 317 of Title III of the Tariff Act approved September 21, 1922, may be made by any person, partnership, corporation or association.

An application is not required to be in any special form but it must be in writing and signed by or on behalf of the applicant and in the case of an application under Section 316 it must be under oath. Every application must state the name, legal residence, business address, occupation and business connection of the applicant, and contain a short and simple statement of the relief sought and the grounds therefor.

No investigation shall be ordered by the Commission unless such application or preliminary investigation discloses to the satisfaction of the Commission that there are good and sufficient reasons therefor under the law.

If the information contained in the application is deemed by the Commission to be insufficient, the Commission may permit the applicant to amend the same or to submit evidence orally or in writing.

PRELIMINARY FINDING UNDER SECTION 316.

In the case of applications for an investigation under Section 316 the Commission shall consider the application and the evidence submitted therewith with a view to determining whether the entry of any goods shall be forbidden pending further investigation in accordance with subdivision (f) of Section 316.

INVESTIGATIONS UNDER SECTIONS 315 AND 316.

An investigation may be ordered by the Commission under Section 315 or 316 either upon the initiative of the Commission or upon application.

The Commission will not be confined to the issues presented in an application but may broaden, limit or modify the issues to be determined.

The Commission shall issue a notice of the nature and scope of any investigation which it may institute under Section 315 or 316 and such notice shall be published in "Treasury Decisions," and in the weekly edition of "Commerce Reports," by one insertion in each thereof.

APPEARANCES.

Any person, partnership, corporation or association, showing to the satisfaction of the Commission an interest in the subject matter of an investigation ordered by the Commission, may enter appearance in such investigation in person or by a representative.

HEARINGS UNDER SECTIONS 315 AND 316.

Parties who have entered appearance in investigations under Sections 315 and 316 shall be notified of the time and place of public hearings by registering and mailing a copy of the notice thereof addressed to each of such parties at the place of business thereof, and at such time and place such parties shall be afforded opportunity to offer such relevant testimony, both oral and written, as the Commission may deem necessary for a full presentation of the facts involved in such investigation.

Hearings shall be public unless the Commission orders otherwise.

Evidence, written or oral, submitted in hearings shall upon order of the Commission be subject to verification from the books, papers and records of parties in interest. Such further investigation may be had as the Commission shall order.

INVESTIGATIONS AND HEARINGS UNDER SECTION 317.

If in any investigation under Section 317 it becomes necessary in the judgment of the Commission to order a hearing a notice shall be given and hearings shall be had, as provided with respect to hearings under Sections 315 and 316.

WITNESSES AND SUBPOENAS.

Witnesses unless otherwise ordered by the Commission shall be examined orally.

The attendance of witnesses and the production of documentary evidence may be required from any place in the United States at any designated place of hearing.

Any member of the Commission may sign subpoenas and members and agents of the Commission, when authorized by the Commission, may administer oaths and affirmations, examine witnesses, take testimony, and receive evidence.

The Commission may order testimony to be taken by deposition in any proceeding or investigation at any state of any such proceeding or investigation. Such depositions may be taken before any person designated by the Commission and having power to administer oaths. Such testimony shall be reduced to writing by the person taking the deposition or under his direction and shall then be subscribed by the deponent. Any person, firm, co-partnership, corporation or association may be compelled to appear and depose and to produce documentary evidence in the same manner as witnesses may be compelled to appear and testify and produce documentary evidence before the Commission.

WITNESS FEES AND MILEAGE.

Witnesses summoned before the Commission shall be paid the same fees and mileage that are paid witnesses in the courts of the United States, and witnesses whose depositions are taken and the persons taking the same, except employees of the Commission, shall severally be entitled to the same fees and mileage as are paid for like service in the courts of the United States. Witness fees and mileage shall be paid by the party at whose instance the witness appears.

THE COMMISSIONER OR INVESTIGATOR IN CHARGE OF INVESTIGATIONS.

The commissioner or investigator in charge of any investigation shall review all the evidence, oral and written, and all other information gathered in such investigation by the Commission, and shall summarize the same and prepare for the Commission in writing a report.

Parties who have entered appearances shall, prior to the filing of briefs, have opportunity to examine the report of the commissioner or investigator in charge of the investigation and also the record except such portions as relate to trade secrets and processes.

BRIEFS.

Briefs may be filed at the conclusion of the testimony in each investigation. The commissioner or investigator in charge of the investigation shall fix a time within which briefs shall be filed and notice thereof shall be given by registered mail to all parties of record.

Briefs shall be printed in such form and manner as the Commission shall direct.

FINAL HEARINGS AND FINDINGS.

Final hearings shall be before the Commission. Parties who have previously entered appearances may file briefs and upon permission being granted by the Commission present oral arguments. The findings of the Commission and of the members thereof shall be in writing and shall be transmitted, together with the record, certified by the Secretary under the seal of the Commission, to the President for his action under the law.

APPEALS UNDER SECTION 316.

Appeals on matters of law under Section 316 shall be governed by the rules relating to appeals to be taken to the United States Court of Customs Appeals from decisions of the United States Board of General Appraisers

TREASURY DEPARTMENT RULES THAT CARBONIZED WOOLS ARE TO BE ADMITTED ON SAME BASIS AS TOPS.

One of the first questions to arise in the administration of the wool schedule of the new Tariff Law of 1922 was in relation to the classification of carbonized wool. The Customs Service held that such wool was provided for in the phrase "advanced in any manner or by any process of manufacture beyond the washed or scoured condition", and was therefore subject to the rate of paragraph 1106, namely, 33 cents per pound and 20 per cent ad valorem. As carbonized wool is merely clean wool from which foreign vegetable matter (chaff, burr, etc.) has been removed by carbonizing,

the wool trade generally and those manufacturers who use this class of wool contended that it was dutiable under paragraph 1102 as wool "imported in the scoured state at 31 cents per pound". Various interests submitted briefs upon the subject to the Treasury Department, or presented oral arguments on behalf of their views. On November 28 Assistant Secretary Clifford promulgated a ruling in a letter addressed to the Collector at Philadelphia, the text of which is as follows:

The department is in receipt of your letter of the 31 ultimo, in which, replying to its letter of the 29th idem requesting information as to the practice at your port in the classification of carbonized wool, you state that the first entry of carbonized wool under the present tariff act was made on the 29 ultimo and that duty was assessed at the rate of 33 cents per pound and 20 per cent ad valorem under paragraph 1106 of the present tariff act.

The proper classification of carbonized wool has been carefully considered by the department and in view of the history of the legislation on the subject, the department has reached the conclusion that carbonized wool is properly dutiable as assessed by you, at the rate of 33 cents per pound and 20 per cent ad valorem, under paragraph 1106 as wool which has been advanced beyond the washed or scoured condition.

This provision in paragraph 1106 is a reenactment of similar provisions appearing in paragraphs 390, 374 and 376 of the tariff acts of 1890, 1897, and 1909 respectively, and the department is in receipt of a report from the Collector of Customs at the port of New York in which he states that carbonized wool was classified under the provisions of the paragraphs mentioned.

The act of 1894 did not contain a provision for duty upon wools advanced beyond the scoured condition, because wool was free; but paragraph 279 of the said act provided that carbonized wool should be subject to duty at the rate of 15 per cent ad valorem.

While paragraph 286 of the act of Oct. 3, 1913, contained a provision for the assessment of duty at the rate of 8 per cent ad valorem on wool which had been advanced in any manner beyond the scoured condition, paragraph 651 of the act provided no nomine for the admission free of duty of carbonized wool, and it is the opinion of the department that the provision in paragraph 651 for the free entry of carbonized wool was for the purpose of excluding the wool from the assessment of duty under paragraph 286 as wool advanced beyond the scoured condition.

In view of the foregoing and as it appears that at one port at least it was the practice to assess duty upon carbonized wool as wool advanced beyond the condition of scoured under the tariff acts of 1890, 1897 and 1909, and it must be presumed that Congress had knowledge of the practice in this regard, you are hereby directed to assess duty upon carbonized wool at the rate of the present tariff act.

This ruling made carbonized wool dutiable at the same rates as wool tops (33 cents and 20 per cent ad valorem); and its practical effect is to make a difference of 2 cents per pound and 20 per cent ad valorem between wools that are practically identical. It is understood that a protest will be filed against this ruling, so that the issue may be tried before the Board of General Appraisers. It is unfortunate that those who had charge of drafting the paragraphs relating to the raw wool did not make a specific provision for carbonized wool by name.

THE PRESENT RESTRICTION OF IMMIGRATION.

IN the review of the past season of Wool Manufacture, reference is made to the abundance of labor at the opening of the season and to the scarcity of labor at the end. The problem of the unemployed seems to have vanished; now the search for help has begun. Congress saw fit, in May 1921, to restrict the immigration of people born in countries other than those of North and South America. A law was made which limited the immigrants from each nation to three per cent of the foreign born persons of each nationality resident in the United States in 1910. This does not apply to countries with which there remain special treaties concerning migration. The law further provides that not more than twenty per cent of the annual quota of a nationality may be admitted in any one month. The act was to have expired, by limitation, on June 30, 1922, but shortly before this date a joint congressional resolution extended it to June 30, 1924.

For a long period, since immigration statistics were first gathered in 1820, the mass of European immigrants came from the northern and western sections. During the later years, however, the proportion of people from that part of Europe has diminished in comparison with the growth in the number from the eastern and southern parts. Not only was it to resist the veritable flood of immigrants which followed the close of the World War that the Percentum Limit Act of 1921 was enacted, but, also, as a means of maintaining the proportion of immigrants from certain nations and of preventing the further increase in the proportion from other nations. It was expected that not only would the number from eastern and southern Europe be curbed, but that emigration from the northern and western parts of this country would be stimulated. Such has not, however, been the result. One difficulty with the present act is that the limit of three per cent is based wholly upon the number of immigrants admitted from a particular country regardless of the number who return to that country from this. Incidentally the nationality of one entering the country is determined by the place of birth.

Since 1911 more skilled labor has entered than departed. In 1922 there was an excess of 34,000; in 1914 it was nearly 150,000; in 1918 it dropped to about 10,000. Of unskilled labor, however, there has not always been in this same period an excess of immigration. In 1914 the supply diminished; in the following year there was emigration of unskilled labor enough to make a net loss as great as 50,000. In 1916 an excess of immigration again appeared and in 1917 mounted to some 50,000 as compared with 350,000 in 1913, the maximum of this period. In 1918 the tide turned once more in favor of emigration of unskilled labor, so that in 1919 the loss was again about 50,000; in 1920 the loss grew to about 80,000. In 1921 immigration was greater than emigration by over 60,000. Under the operation of the Percentum Limit Act the supply of unskilled labor dropped again so that there has been a net emigration of almost 60,000. With pre-war figures, representing yearly averages for the five year pre-war period, 1909-10 to 1913-14, the net immigration of those without occupation amounted to about 220,000. Only 76,000, in comparison, entered during the year 1921-22. Those of miscellaneous occupations fell

from 126,000 to 50,000. Skilled laborers dropped in number from 118,000 to 34,000. The number of incoming laborers averaged 23,000 in this period before the war but in 1921-22 dropped in number so that there was a net loss of 67,000 unskilled laborers.

In the same five-year period the three groups of immigrants from Austria-Hungary, Russia and Finland, and Italy amounted, in each case, to nearly twenty-five per cent of the total immigration from Europe. The percentage from Great Britain was about ten, from Scandinavia and Germany four each, and about three from Greece. In 1920-21 the largest group in percentage was from Italy who made about thirty-two per cent of the total. Those from Austria-Hungary dropped to less than one per cent, those from Russia to less than two per cent, while those from the United Kingdom, who were slightly fewer in number than before the war, increased to almost twelve per cent. The percentage of Scandinavian immigrants was about the same as before the war, although numerically less. The immigrants from Greece gained in numbers and in per cent to slightly more than four.

Under the present Percentum Limit Act about 356,000 might be admitted from Europe. Some countries furnished their quota but as other countries failed to supply their number the total immigration, instead of reaching the limit, exceeded but little more than 230,000. Under the new law the United Kingdom was entitled to 77,000 and but 40,000 availed themselves of the privilege. Scandinavia, entitled to about 38,000, sent but 16,000; Russia, although entitled to 38,000, furnished but 28,000; Germany, from which 68,000 could be admitted, sent but 18,000; Australia sent but little more than half as many as were permitted; Hungary, Czechoslovakia, Poland and Italy reached their limits. Italy, on its part, is burdened by an ever increasing population, but as it has sent its quota, more Italians under the present law may not be admitted. Numerous Italians have emigrated from this country so that recently there has been a large net loss of this nationality.

This restriction of immigration, unless Congress extends it by special act, terminates on the first of July, 1924. Immigration, therefore, is a problem which is immediately before the country. It should be determined whether or not a percentum limitation is needed, and if one is chosen the question of net immigration is an important part of the consideration. Further, as proposed by Secretary Davis, of the Department of Labor, the proper point of examination may be found to be the port of departure rather than the port of entry of the immigrant. With such a plan this country, rather than other countries, can determine who shall leave for our shores. The great question of literacy in the next discussion of an immigration law may again become an important consideration. A suggestion has been made that illiterate immigrants may be admitted freely as such; in order to remain, they must, within a stated time, qualify by passing certain mental tests. Such a proposition may receive serious consideration as a substitute for the literacy test for admission, the passing of which permits entrance without restriction as to length of stay. The industries may realize that illiterate help, which must qualify in certain

intelligence tests in order to remain, is as desirable as the labor admitted on the basis of a knowledge of reading and writing at entrance. Many a foreign born agitator, with his nimble tongue and active brain, may now be admitted without time limit, regardless of his becoming Americanized in a reasonable time.

WORLD ECONOMIC SITUATION FOR 1923.

WE have received from the Department of Commerce the following review of the world economic situation for 1923 by Secretary Herbert Hoover:

The following summary of the world's economic situation and prospects is based upon the special investigation of the Department's representatives in each foreign country.

In the large view the world has made distinct economic progress during the past year and the conditions are very favorable to continued progress during 1923. There are in exception three or four states in Europe which give continued anxiety, but these exceptions should not obscure the profound forces of progress elsewhere over the whole world. In the main even in these areas of uncertainty the difficulties are to a large degree fiscal and political rather than commercial and industrial.

During the year the world generally has gained in social stability; Bolshevism has greatly diminished and even in Russia has been replaced by a mixture of socialism and individualism; at least active war has ceased for the first time since 1914; famine and distress have diminished to much less numbers this winter than at any time since the great war began; production has increased greatly during the past year; unemployment is less in world totals than at any time since the armistice; international commerce is increasing; the world is now pretty generally purchasing its commodities by the normal exchange of services and goods, a fact which in itself marks an enormous step in recovery from the strained movements of credit and gold which followed the war.

In our country unemployment has ceased to be a problem and we are indeed upon an economic level of comparatively great comfort in every direction except for the lag of recovery in some branches of agriculture. Even in this field there has been a distinct improvement in prices in the past twelve months and its troubles are mostly due to over production in some lines. Our manufacturing industries are engaged well up to the available labor; industrial production has enormously increased over last year; real wages and savings are at a high level. Our transportation and housing show great gains in construction, though we are yet behind in these equipments. Both our exports and our imports are again increasing after the great depression and are today far above prewar levels.

Outside of Europe the whole world has shaken itself free from the great afterwar slump. The economic wounds of Asia, Africa, Latin America, and Australia from the war were more the sympathetic reaction from slump in the combatant states than direct injury. Their production and commerce have recovered to levels above prewar. The enforced isolation of many areas in Latin America and Asia during the war has strengthened their economic fibre by increased variety of production and has contributed vitally to their effective recovery.

In Europe, England, together with the old neutral nations, is making steady progress in production and diminishing unemployment. Their trade and commerce are improving; their governmental finances are growing stronger; their currencies that are not already on a gold basis are

steadily approaching par; and their exchanges are more stable. The combatant states on the Continent are slower in recovery. Even these nations, including Russia, have shown progress all along the line in commercial, industrial, and agricultural fields although the harvests suffered in some spots. Some of these nations such as Italy, Belgium, The Baltic States, Poland, Czechoslovakia, and Hungary show increasing political and social stability and improvement in their Governmental finances. In Germany and some minor states in southwestern Europe governmental finance and political difficulties threaten to overwhelm the commercial and industrial recuperation already made.

NATIONAL INDUSTRIAL CONFERENCE BOARD MAKES REPORT UPON MINIMUM COST OF LIVING IN LAWRENCE IN JUNE 1922.

THE National Industrial Conference Board, 10 East 39th Street, New York City, has recently made public the results of a field study of the minimum cost of maintaining a fair American standard of living according to conditions actually prevailing among the mill-workers' families in Lawrence, Massachusetts, in June, 1922. This study was made practically at the height of the textile strike in that city which extended from late in March, 1922 to the end of August, 1922. The results of the study are of especial interest because they make possible a comparison of the cost of living among wage-earners' families after the wage reductions announced in December, 1920 and the additional reductions announced in March, 1922 with the cost of living in November, 1919, when the National Industrial Conference Board made its first study of living costs in that city.

In the earlier report the minimum cost of living was estimated only for a family of five persons. Studies by the National Industrial Conference Board, since the original Lawrence investigation was made, reveal that families of American wage-earners average less than five persons, but that conditions in this respect differ among different communities. Lacking precise evidence regarding the average size of wage-earners' families in Lawrence, the cost of living has been estimated for those in which there were one, two or three children.

So far as practicable, prices were obtained in June, 1922 from the same agencies which furnished information in November, 1919. This was not always possible, however, since certain individuals and organizations were no longer in business. In all cases an attempt was made to obtain substitutes in the same neighborhoods, carrying the same general line of goods. With regard to pricing identical goods, obstacles also were met. This applied particularly to clothing, since during the great scarcity of goods in November, 1919, merchants and purchasers were glad to obtain articles of a quality which were not in demand in June, 1922, and which, therefore, were not in stock and could not be priced.

The Conference Board emphasizes that, in considering the estimates of the cost of living arrived at as a result of this study, these estimates should be taken as representing only the minimum cost of maintaining a fair American standard of living and not the average cost or even the cost which

is necessarily representative of the entire group of wage earners covered at the time and place. Furthermore, while costs are given for a family with three children, as well as for families with one or two, this does not imply that such families are representative of conditions actually existing. Previous studies by the Board indicate that the number of children per family is generally somewhat less than three. Nor is the minimum cost of living necessarily the measure of a living wage since in the great majority of families there are other sources of income than the earnings of the principal bread winner.

FOOD—It was found that in June, 1922 the cost of a minimum food budget amounted to \$5.85 a week for a family with one child, \$7.40 for a family with two children and \$8.95 for a family with three children on the basis of prices then prevailing. The equivalent yearly costs were \$304.20 for a family of three persons, \$384.80 for a family of four persons and \$465.40 for a family of five.

RENT—The minimum rent for any sort of accommodation in June, 1922 was reported to be \$1 a room a week. The accommodations available for this amount were frequently out of repair or even insanitary, so that it appeared necessary to allow at least \$5 a week for rent in Lawrence in June, 1922 to secure four satisfactory rooms, which is the minimum requirement for families of four or five persons living at a standard consistent with American ideas. For this rent a bath might or might not be obtained, but there would be gas and a toilet. The annual rent for such a tenement would be \$260. A smaller family could probably secure satisfactory accommodations for \$4 a week or \$208 a year.

CLOTHING—The total outlay necessary for a minimum allowance of clothing required in one year for a man, woman and one child would be \$167.36; for a family with two children \$197.64; for a family with three children \$227.92. Corresponding weekly costs would average \$3.22, \$3.80 and \$4.38 respectively.

FUEL AND LIGHT—Coal cost \$16.50 a ton in Lawrence in June, 1922, and gas was \$1.55 a thousand. Combining the cost of fuel and light on this basis, with a small allowance for wood and matches, the necessary minimum yearly cost of fuel and light is found to have been \$82.70 for families with two or three children; families with only one child would require to spend \$79.88 a year. These sums correspond to \$1.59 and \$1.54 respectively each week.

SUNDRIES—Combining the cost of sundries, such as transportation, recreation, medical care, insurance, candy, tobacco, reading material, household furnishings, etc., on the basis of the needs of a family of five in June, 1922, the complete minimum allowance for sundries for a man, woman and three children under 14 years of age is found to have been \$237.12 a year or \$4.56 a week. Families with one child would need \$3.14 a week or \$163.28 a year; families with two children, \$3.85 a week or \$200.20 a year.

THE COMPLETE BUDGET—The average cost of the separate major items in the minimum family budget, and of all items combined, indicate that in order to maintain a family of man, woman, and one child under 14 years of age at a fair minimum American standard, according to conditions as they

actually existed in Lawrence, in June, 1922, \$922.72 a year or \$17.75 a week would be necessary; families with two children would need \$21.64 a week or \$1125.34 a year; and families with three children \$24.48 a week or \$1273.14 a year.

These figures measure only the minimum cost of living and allow nothing for saving. They assume that the woman does all of the housework, cooking, laundry and a certain amount of the family sewing.

Comparing the cost of the various items in the family budget based on quotations for goods secured so far as possible from identical stores, it was found that the average cost of the minimum allowance of food for a family in Lawrence had decreased 23 per cent between November, 1919 and June, 1922; that the average change in rents in this period was 43 per cent; that the man's clothing budget had decreased 22.8 per cent; the woman's 34.2 per cent and the children's 14.1 per cent or that of the entire family 23 per cent between November, 1919 and June, 1922. The combined cost of fuel and light in June, 1922 was found to have increased 16 per cent over that in November, 1919, while the cost of the sundry items for a family decreased 11 per cent in this period.

Combining the increases and decreases noted for the major items in accordance with their distribution in the budget, it appears that between November, 1919 and June, 1922 the minimum cost of living in Lawrence decreased 9.7 per cent. This comparison is based on quotations of prices obtained for identical goods from identical dealers. If a comparison be made of the cost of living on the basis of goods available on each date in the stores where wage earners might buy, the decrease was 8.8 per cent.

WILLIAM M. WOOD ELECTED DIRECTOR GENERAL OF THE CONSOLIDATED TEXTILE CORPORATION.

MR. William M. Wood, chairman of the Board and president of the American Woolen Company, was elected Director General and Chairman of the Board of the Consolidated Textile Corporation on November 27; Andrew G. Pierce, Jr., vice president of the American Woolen Company and treasurer of the Pierce Manufacturing Company of New Bedford, was elected President and Director of the Consolidated. Under the new management William M. Wood will be head of the manufacturing end of the Consolidated business. In addition, Mr. George L. Shepley, 2d vice president of the American Woolen Company, and Henry P. Finney, a director of the company, were added to the Board. Messrs. Wood, Pierce and Shepley constitute the Executive Committee of three of the American Woolen Company. Four of the seven members of the Board of the American Woolen Company are now identified with the Consolidated Textile Corporation. It is announced that there will be no corporate connection between these two companies, that both are distinct factors, that the new organization is merely an affiliation in management of the heads of the largest wool group and the largest cotton group, and that these members of the organization of the American Woolen Company have been elected as individuals.

LONDON CONFERENCE ON ANTHRAX.

IN answer to an invitation Dr. M. Dorset, chief of the bio-chemic division of the Bureau of Animal Industry of the United States Department of Agriculture attended in an unofficial and consultative capacity the conference, held in London on December 5, by the International Advisory Committee on the Prevention of Anthrax. Delegates were present from England, India, Australia, Italy, Sweden, Germany, France, Union of South Africa, and Belgium. This body has for its principal object the study of methods of disinfecting wool, hides, hair, and similar products so as to protect workmen from the danger of infection with anthrax, a fatal blood disease of many domestic animals which is also very dangerous to humans and is sometimes known as "wool sorters' disease."

England has been particularly active in taking steps to eliminate the danger of infection of workmen in wool-handling establishments, and the committee agreed that for wool the English method seems to be effective. The cost of disinfecting wool brought into the country is said to be approximately three cents a pound.

The British Department Committee on Anthrax in its report published in 1918 described a method of disinfecting. By this process wool is first scoured in a warm alkaline soap solution and then soaked in a warm solution of formaldehyde, after which the wool is dried in a current of air heated to the temperature of 160 F.

The Committee decided that in addition to disinfection precautions it is advisable to prepare a list of countries from which wool can be imported with safety without disinfection. It was recommended that hair and bristles always be disinfected and that under certain conditions wool should be. Wool and hair from southern, central and western Asia and from Egypt are the special importations about which there is most concern. In making up the list of countries from which wool can be admitted with safety without disinfection it was suggested the decision should be based upon information concerning the prevalence of cases of human anthrax in industries, the occurrence of the bacilli in products, and the precautions that are taken by the various countries to prevent the spread of the disease among animals.

Although wool can be disinfected successfully, no method has yet been devised whereby hides and skins can be effectively treated without damaging them, and it seems advisable for all countries concerned to make efforts to discover a suitable method.

So far there is little cause for alarm over the danger of anthrax to workers in the United States. The best figures available, according to the Department of Agriculture, show that in the eight years up to and including 1917 there were only 222 deaths of humans from anthrax in this country. Of these only about 25 or 30 per cent were of industrial workers. About 20 per cent of the deaths during this period were of farmers who became infected in most cases as a result of skinning animals that died on the farms. There is no protection against this kind of infection except to bury animals which have died from unknown causes without trying to salvage

the hides. Those who handle wool, hides, and hair at docks also would not be protected by disinfection which must be done after the wool has been unloaded and taken to the disinfecting plant.

At the request of Dr. Dorset an inquiry was sent to members of this association concerning the prevalence of this disease among their employes. The answers show conclusively that it is very rare. But one case was reported and that seemed not to be traced to the handling of wool.

STANDARD WOOL GRADES.

SINCE 1915 the Bureau of Animal Economics of the United States Department of Agriculture has had before it the problem of defining standards for wool grades. In 1917, the Quartermaster Corps of the Army called upon the department for such standards. Those who are familiar with the Government specifications know that they state, concerning the manufacture of certain wool products, that specified grades are to be used, or grades not lower than those required by the specifications. During the war, Government inspectors and mill agents differed in their judgment upon grades and as there were no recognized standards, controversies arose.

During the study of this problem of standards the careful examination of several thousand samples submitted by dealers and manufacturers indicates that the diameter of the domestic wool fiber varies from 1-350 to 1-2500 of an inch. The Bureau has chosen to divide the wool into grades according to the diameter measure and length of fiber. The work has progressed far enough to make it desirable to invite the criticism of representatives of the wool industry. Hence, conferences have recently been held in Boston, Philadelphia and Chicago. At these conferences a tentative sample box of wool fibers was exhibited. The fibers were arranged according to their diameter and length. The tapes fastening the fibers, near their ends, to the case formed an acute right triangle with the smallest angle at the left and the right angle at the other end with its longer side horizontal. Other vertical tapes divided this triangle into seven sections which have had associated with them, and beginning from the left, where the finest fibers are, the terms: fine, $\frac{1}{2}$ blood, $\frac{3}{8}$ blood, $\frac{1}{4}$ blood, low $\frac{1}{4}$ blood, common, and braid.

Already the Department of Agriculture has had experience in defining standards. Those for apples and potatoes have found general acceptance, but the conditions concerning such agricultural products are quite different from those of wool. The need of a definite grade of wool not only exists with the wool growers but increases as the wool is carried on in its manufacture into fabrics. At these conferences reference was made to the fact that we are dependent upon foreign countries for much of our wool and that the greatest quantity comes from Great Britain and her Dominions. On this account it was suggested that the nomenclature already used by Great Britain should not be ignored. Further, it was pointed out that the requirements of the manufacturer are different from those of the wool

grower; the former needs to have a greater number of divisions. The representatives of the Bureau of Animal Economics seemed interested in the suggestion that the British count system be used in connection with their seven larger divisions. Each of the groups already named could include certain of the British counts, and then afford for the manufacturer a finer scale. Additional conferences were proposed by the bureau.

JOINT COMMITTEE ON RESEARCH AND STANDARDIZATION MEETS IN CONFERENCE WITH THE DIVISION OF SIMPLIFIED PRACTICE.

At the invitation of Mr. William A. Durgin of the Division of Simplified Practice of the Department of Commerce, the Joint Committee on Research and Standardization representing wool manufacturers met the division in conference in Washington last December. The Division of Conservation had, as one of its functions, made an attempt during the war to reduce the number of standard sizes and patterns in general use. At the end of the war this division ceased; but on account of the demand for further help upon the problem of simplifying production, Secretary Hoover organized a new service which has become known as the Division of Simplified Practice. Already recommendations concerning the dropping of sizes and styles of certain products have been made and adopted. The policy of the division is to invite representative groups of an industry to conferences to explain its purpose; it asks that surveys be made of the percentage use of sizes and styles of products. With such a study it is expected that some will be found used so infrequently that they may be omitted without inconvenience to the consumer. It is claimed by the Division that simplified practice will decrease stocks, production costs, selling expenses, misunderstandings and all costs to the user (including initial accessory and maintenance costs). At the same time it is claimed that simplified practice will increase turnover, stability of employment, promptness of delivery, foreign commerce, quality of product and profit to producer, distributor and user. Some seventy groups are already using the service offered by the Department in working out definite simplified practice recommendations. While this Joint Committee on Research and Standardization is open-minded and willing to co-operate with this division, it realizes that the wool manufacturers produce fabrics which are made not only for protection but for adornment. The call for its goods is subject to constantly varying fashions, yet certain cloths are in continuous demand. For these fabrics there are used, in instances, numerous shades of the same color and weights varying in unnecessarily many grades. As the cloth manufacturers from their use of yarns can tell the relative demand of each kind of yarn, so the clothing makers from their use of cloth are able to report upon the percentage use of types, weights and color shades of fabrics. Hence, a conference between this division and the clothing manufacturers will be a step forward in the study of ways and means to eliminate superfluous gradations of color shades, and weights.

UNITED STATES VETERANS' BUREAU EMPLOYMENT
SERVICE CONFERENCE.

GOVERNOR Cox of Massachusetts called a conference in Boston of representatives of trade associations and Chambers of Commerce of the State before whom Colonel J. F. J. Herbert, employment representative of the United States Veterans' Bureau, explained the needs of the rehabilitated soldiers of the World War. While this meeting was for the district which comprises the New England states, except Connecticut, the problem of finding employment for the veterans who have been trained under the direction of the Veterans' Bureau is a national one. The Federal Government has provided vocational training in order to give to men, incapacitated for their former work, a training which will fit them for specialized work in new occupations. No veteran is declared rehabilitated until the representative of the Government, the representative of the firm or institution with which he has been in training and his counsellor all declare that he is able, efficient, and qualified to take a place in industry. The Bureau has taken care to assist soldiers in selecting lines of work for which they are physically and mentally fit, and it does not recommend these men until it is convinced that they are able to compete with men at work. It does not ask favors for its men, but only opportunities.

Several of those present at the conference held in December spoke of their interest in the work of the Bureau, and of their desire to co-operate and help find positions for these veterans. It was requested by the speakers that lists be provided of those available with their qualifications and recommendations. The delegates present were asked to become a committee to advise and co-operate with the employment representative of the United States Veterans' Bureau. Colonel Herbert has recently issued a bulletin containing a list of the various branches of industry for which veterans have been trained, with names of the soldiers whose training for these various positions is now complete; as others finish their preparation new bulletins will be issued. He asks the men in charge of the industries to give these candidates opportunities to prove that they are once more able to resume gainful occupations.

DIFFERENT VIEWS ON THE EFFECT OF THE NEW TARIFF.

WHEN some British wool manufacturers recently came to visit this country it was reported that they were of the opinion that the British wool industry will not suffer because of the new tariff act, except in lower grade goods. Also, they are said to believe that there will be an increasing demand for their product. A short time later a delegation of French representatives of wool manufacturers, expressed quite different views. Two of them, who are recognized authorities in the industry, declared that the present act shuts out their products. In their belief, they must seek other outlets for their goods. They spoke of the improvement in the French industry since the textile strike in France was settled several months

ago. Although some apprehension was expressed that as the franc began to decline there might be another strike, the franc has revived and the thought of another strike is dispelled for the present.

CREDIT TO WHOM CREDIT IS DUE.

IN *Dalgety's Review* of March 10 and 17, 1922 appeared two installments of an article entitled "Estimating Wool Yields" the authorship of which was there credited to M. Robert Dantzer. The same article appeared in *The Wool Record and Textile World* of Bradford, England, in its issue of May 11, 1922, the editor preceding the article with a statement of which the following is a part:

How difficult it is to be absolutely accurate, however, is shown in the experience of France in testing wool by shrinkage during the great World War. The experience gained is summarized in a statement by M. Robert Dantzer, superintendent etc. * * * * who was in charge of the testing of wool goods for the French Government during the World War. At present he is engaged in the French Service de la Reconstitution in the textile industry. We are indebted to *Dalgety's Review* for the following account.

In our own introduction to the article we stated that some of the difficulties of estimating wool yields "are well brought out in an article which appeared within recent months in *Dalgety's Review*" and we also stated that the experience gained in the many tests shown by the experience of France "has been summarized in a statement by M. Robert Dantzer, superintendent etc * * * * who was in charge of the testing of wool goods for the French Government during the war. We also stated that the article was of such importance and interest that it was reproduced *in extenso*.

Having seen the article both in *Dalgety's Review* and again in the *Wool Record and Textile World*, the latter giving credit to *Dalgety's Review* for it and having named M. Dantzer as the author of it, we thought we had given credit to all to whom credit was due.

Since July, however, our attention has been called by a representative for the Carded Woolen Manufacturers Association to the fact that while M. Dantzer is the author of the article, it was paid for by the Association, translated from the French by its representative, facts of which we were not informed when the article was printed, and presented to the Finance Committee of the Senate with the brief submitted on behalf of the Carded Woolen Manufacturers Association and read at the hearings held December 14, 1922 by the Committee when the Fordney-McCumber bill was pending in the Senate.

When the article was reprinted by us, full credit was given to the source from which we derived it; but in view of the information since received that the article was paid for by, or on behalf of, the Carded Woolen Manufacturers Association and translated by its representative, we very willingly (in addition to acknowledgment already made to the author) accord due credit to the Carded Woolen Manufacturers Association for having procured the article and for its translation.

AUCTION SALES OF WOOL IN ENGLAND, AUSTRALIA AND
NEW ZEALAND.

For the first part of the calendar year of 1923 auction sales in England Australia and New Zealand are scheduled as follows:

ENGLAND.

LONDON.
January 23
March 6
April 24
June 19

LIVERPOOL.
January 18, 19
March 1, 2
April 19, 20
June 14, 15

HULL.
January 12
February 23
June 8

AUSTRALIA.

SYDNEY.
January 8-17
Jan. 29-Feb. 28
March 12-22
April 9-18
April 30-May 9

BRISBANE.
January 23-25
March 6-8
April 24-26

MELBOURNE.
January 15-30
February 5-19
March 5-15
March 19-27
April 9-17

GEELONG.
Jan. 31-Feb. 1
February 21, 22
March 7, 8
April 18, 19

ADELAIDE.
January 26
March 2
April 6

NEW ZEALAND.

WANGANUI.
January 8
February 15

NAPIER.
January 12
February 19

WELLINGTON.
January 17
February 23

CHRISTCHURCH.
January 23
March 1

INVERCARGILL.
January 27
March 6

QUARTERLY REPORTS FOR FOREIGN WOOLS BY
MAUGER AND AVERY END.

WITH this issue of the Bulletin, the quarterly reports of the Boston market for foreign wools, which have been so accurately and satisfactorily prepared since the issue of June 1893 by Mauger and Avery, come to an end because of the death of Mr. Charles F. Avery. Over this long period, these reports have earned a well deserved reputation for accuracy, not only in the trade, but they are recognized also in the country's courts, both State and Federal, where they are regarded as authoritative in suits involving disputes concerning the value of wool.

Owing to the death of Mr. Avery, the business will be liquidated. The firm name which has been favorably known since 1878, not only in the Boston wool trade but also abroad, will disappear, and a corporation, whose officers and directors were long associated with the firm of Mauger and Avery, will continue the business under the name of Bigelow, Reed

and Company, Inc. The officers of this corporation have kindly consented to continue the valuable work heretofore done by Mr. Avery, and we shall publish their first report in the April issue of this Bulletin. The officers of the new company are, President, William R. Reed; Treasurer, C. Willard Bigelow; Directors, Ernest Braithwaite, James S. Farquhar, Albert Schofield, and Emile J. Weber.

B. A. W. R. A. WOOL STOCKS.

Based on Cablegram from Commercial Attaché Tower, London.

| | Stocks and Afloat Dec.31,1921 (Bales) | Stocks and Afloat Nov.30,1922 (Bales) | Stocks and Afloat Dec.31,1922 (Bales) |
|--------------------------------|--|--|--|
| Australian | | | |
| Merino: | | | |
| Combing..... | 308,048 | 60,567 | 60,567 |
| Clothing..... | 67,399 | 5,971 | 5,971 |
| Carbonising..... | 44,070 | 7,267 | 7,267 |
| Totals, Merino..... | 419,517 | 73,805 | 73,805 |
| Crossbred: | | | |
| Combing: | | | |
| Fine 50/58/60's..... | 331,380 | 173,165 | 170,000 |
| Medium 44/46's..... | 121,569 | 100,275 | 95,000 |
| Low 40's and below..... | 55,965 | 44,448 | 38,000 |
| Clothing: | | | |
| Fine 50/58/60's..... | 51,138 | 31,092 | 36,000 |
| Medium 44/46's..... | 32,870 | 26,185 | 22,000 |
| Low 40's and below..... | 19,641 | 15,833 | 12,000 |
| Carbonising: | | | |
| Fine 50/58/60's..... | 84,166 | 64,638 | 63,000 |
| Medium 44/46's..... | 45,985 | 36,620 | 34,000 |
| Low 40's and below..... | 13,353 | 10,226 | 10,000 |
| Total Crossbred..... | 756,067 | 502,482 | 480,000 |
| Grand Totals, Australia..... | 1,175,584 | 576,287 | 553,805 |
| New Zealand | | | |
| Crossbred (bulk combing): | | | |
| Merino..... | 2,732 | 2,465 | 2,000 |
| Fine 56/58's..... | 17,221 | 9,736 | 9,700 |
| Medium 46/50's..... | 149,197 | 86,214 | 85,000 |
| Low 44's and below..... | 211,465 | 124,773 | 121,000 |
| Slipes..... | 126,282 | 73,442 | 73,000 |
| Scoured..... | 127,255 | 67,977 | 67,000 |
| Grand Totals, New Zealand..... | 634,152 | 364,607 | 357,700 |
| South Africa..... | 80,652 | | |
| Grand Total B. A. W. R. A..... | 1,890,388 | 940,894 | 913,000 |

NOTE—The last total does not check as stocks are given to the nearest thousand.

Statistics for Fourth Quarter.

ACTIVE AND IDLE MACHINERY AS OF OCTOBER 1,
NOVEMBER 1, DECEMBER 1, 1922,
AND JANUARY 1, 1923.

AS REPORTED BY THE BUREAU OF THE CENSUS, UNITED
STATES DEPARTMENT OF COMMERCE.

THE reports issued by the Bureau of the Census of the active and idle machinery in the wool manufacture as of the first of October, November, December, 1922 and January, 1923 covering the months immediately preceding the date of the report are herewith presented. Reports on active and idle machinery were begun by the National Association of Wool Manufacturers in December 1913, and since that date they form a continuous record of the state of the industry. In November 1918 the Bureau of Markets asked to take over the work, and later it was turned over to the Bureau of the Census, its first report being as of July 1, 1919.

The reports for the four months mentioned show that there was improvement in the wool manufacture, the figures as of January 1, for the month of December being slightly higher for percentage of active machines to the total reported, except in cards, combs, and worsted spinning spindles, than in the report as of November 1. The activity of broad looms showed an advance of .3 per cent; narrow looms, of .7 per cent; carpet and rug looms, of .6 per cent, and woolen spinning spindles of .1 per cent, while cards showed a loss of .5 per cent; combs of 3.9 per cent, and worsted spinning spindles of .8 per cent.

The gain made during the year, however, was satisfactory on the whole. A comparison of the figures for December 1921 with those for December 1922, shows a consistently stronger position than a year ago, the woolen branch making a better showing than the worsted. The broad looms show a gain of 11.4 per cent; the narrow, of 3.9 per cent; the carpet and rug looms, of 11.1 per cent; cards of 11.1 per cent, woolen spinning spindles of 9.6 per cent; combs of 1.6 per cent, and worsted spinning spindles of 2.2 per cent.

The worsted branch recovered from the slump, partly due to strikes and partly to lack of orders, indicated by the reports as of April, May, June, July, and August 1, respectively; and in November the combs were employed to 87 per cent of capacity, while the worsted spinning spindles were 90 per cent active, although in December this favorable condition did not continue. In fact, in the reports as of November 1 and December 1, those for active and idle machine hours for combs showed in the former

report an excess of overtime amounting to 34,775 hours, or 6.4 per cent, and for the latter an excess of 65,380 hours, or 11.4 per cent. In December, however, the excess was 20,427 hours, or 3.8 per cent.

During the months reported there was some fluctuation month by month in the activity of the various machines, but by and large there was a gratifying improvement in the latter months of the year which measured a gain in all branches of the industry. The wool consumption has been very large during the months reported, and if the increased cost for all raw materials, which means an increased cost of production, does not curtail consumption, this year should be one of similar progress. Present indications seem to point to continued, if slow, improvement.

PERCENTAGES ARE BASED ON SINGLE SHIFT TIME.

October 1, 1922.

Summary of Reports of 988 Manufacturers, Operating 1,179 Mills.

| | Looms | | | Sets of Cards | Combs | Spinning Spindles | |
|------------------|-------------------------------------|----------------------------------|----------------------|---------------------|-------|-------------------|-----------|
| | Wider than 50 inch reed space | 50 inch reed space or less | Carpet and Rug | | | Woolen | Worsted |
| In operation.... | 45,915 | 13,767 | 7,502 | 6,108 | 2,035 | 1,962,132 | 2,050,114 |
| Idle..... | 17,533 | 4,251 | 1,648 | 974 | 565 | 354,497 | 468,324 |
| Total..... | 63,448 | 18,018 | 9,150 | 7,082 | 2,600 | 2,316,629 | 2,518,438 |

November 1, 1922.

Summary of Reports of 994 Manufacturers, Operating 1,183 Mills.

| | Looms. | | | Sets of Cards | Combs | Spinning Spindles | |
|-------------------|-------------------------------------|----------------------------------|----------------------|---------------------|-------|-------------------|-----------|
| | Wider than 50 inch reed space | 50 inch reed space or less | Carpet and Rug | | | Woolen | Worsted |
| In operation..... | 49,000 | 14,257 | 7,721 | 6,139 | 2,265 | 1,960,270 | 2,247,062 |
| Idle..... | 14,567 | 3,768 | 1,555 | 1,017 | 345 | 361,181 | 274,626 |
| Total..... | 63,567 | 18,025 | 9,276 | 7,156 | 2,610 | 2,321,451 | 2,521,688 |

December 1, 1922.

Summary of Reports of 993 Manufacturers, Operating 1,182 Mills.

| | Looms. | | | Sets of Cards | Combs | Spinning Spindles | |
|------------------|-------------------------------------|----------------------------------|----------------------|---------------------|-------|-------------------|-----------|
| | Wider than 50 inch reed space | 50 inch reed space or less | Carpet and Rug | | | Woolen | Worsted |
| In operation.... | 51,493 | 14,483 | 7,807 | 6,031 | 2,309 | 1,961,444 | 2,274,918 |
| Idle | 12,240 | 3,184 | 1,458 | 1,010 | 345 | 361,334 | 251,507 |
| Total..... | 63,733 | 17,667 | 9,265 | 7,041 | 2,654 | 2,322,778 | 2,526,425 |

January 1, 1923.

Summary of Reports of 987 Manufacturers, Operating 1,175 Mills.

| | Looms | | | Sets of Cards | Combs | Spinning Spindles | |
|------------------|-------------------------------|----------------------------|----------------|---------------|-------|-------------------|-----------|
| | Wider than 50 inch reed space | 50 inch reed space or less | Carpet and Rug | | | Woolen | Worsted |
| In operation.... | 51,622 | 14,498 | 7,839 | 5,994 | 2,190 | 1,955,746 | 2,257,815 |
| Idle..... | 12,008 | 3,034 | 1,397 | 1,042 | 444 | 359,270 | 273,141 |
| Total..... | 63,630 | 17,532 | 9,236 | 7,036 | 2,634 | 2,315,016 | 2,530,956 |

NOTE—All figures dated the first of the month cover the preceding month.

Number of Machines in Operation Per Shift

| | | | | | | | |
|-------------------|--------|--------|-------|-------|-------|-----------|-----------|
| Jan. 1, 1923: | | | | | | | |
| Single Shift..... | 48,136 | 14,402 | 7,624 | 5,226 | 1,532 | 1,720,356 | 2,042,694 |
| Double Shift..... | 3,486 | 96 | 215 | 768 | 658 | 235,390 | 215,121 |
| Dec. 1, 1922: | | | | | | | |
| Single shift..... | 48,455 | 14,387 | 7,607 | 5,277 | 1,557 | 1,749,135 | 2,056,770 |
| Double shift..... | 3,038 | 96 | 200 | 754 | 752 | 212,309 | 218,148 |
| Nov. 1, 1922: | | | | | | | |
| Single shift..... | 46,558 | 14,161 | 7,522 | 5,373 | 1,645 | 1,739,419 | 2,049,351 |
| Double shift..... | 2,442 | 96 | 199 | 766 | 620 | 220,851 | 197,711 |
| Oct. 1, 1922: | | | | | | | |
| Single shift..... | 43,770 | 13,713 | 7,302 | 5,400 | 1,550 | 1,757,038 | 1,871,424 |
| Double shift..... | 2,145 | 51 | 200 | 708 | 485 | 205,094 | 178,690 |
| Sept. 1, 1922: | | | | | | | |
| Single shift..... | 39,015 | 12,213 | 7,063 | 5,263 | 1,475 | 1,716,389 | 1,703,925 |
| Double shift..... | 1,578 | 54 | 192 | 683 | 493 | 196,331 | 156,928 |
| Aug. 1, 1922: | | | | | | | |
| Single Shift..... | 39,040 | 12,160 | 6,993 | 5,299 | 1,395 | 1,721,819 | 1,525,842 |
| Double shift.... | 1,852 | 54 | 161 | 699 | 500 | 206,136 | 153,266 |
| July 1, 1922: | | | | | | | |
| Single shift..... | 37,909 | 12,224 | 6,949 | 5,379 | 1,492 | 1,768,302 | 1,562,881 |
| Double shift..... | 2,061 | 81 | 146 | 705 | 455 | 210,282 | 126,355 |
| June 1, 1922: | | | | | | | |
| Single shift..... | 37,427 | 11,883 | 6,885 | 5,337 | 1,445 | 1,776,092 | 1,535,913 |
| Double shift.... | 2,000 | 22 | 99 | 660 | 445 | 199,062 | 106,875 |
| May 1, 1922: | | | | | | | |
| Single shift..... | 36,066 | 11,808 | 7,026 | 5,227 | 1,421 | 1,729,959 | 1,498,599 |
| Double shift.... | 1,804 | 10 | 85 | 619 | 389 | 188,347 | 99,396 |
| April 1, 1922: | | | | | | | |
| Single shift..... | 39,274 | 13,332 | 6,995 | 5,208 | 1,542 | 1,712,251 | 1,725,456 |
| Double shift.... | 1,708 | ..... | 105 | 607 | 414 | 196,194 | 109,020 |
| Mar. 1, 1922: | | | | | | | |
| Single shift..... | 41,473 | 13,452 | 6,796 | 5,211 | 1,571 | 1,710,935 | 1,912,267 |
| Double shift.... | 1,697 | ..... | 146 | 539 | 635 | 168,416 | 121,950 |
| Feb. 1, 1922: | | | | | | | |
| Single shift..... | 39,803 | 13,396 | 6,765 | 5,784 | 1,485 | 1,562,512 | 1,964,615 |
| Double shift.... | 1,384 | ..... | 103 | 431 | 500 | 107,679 | 124,348 |
| Jan. 1, 1922: | | | | | | | |
| Single shift..... | 42,815 | 13,982 | 6,679 | 4,849 | 1,427 | 1,604,177 | 1,986,845 |
| Double shift.... | 1,344 | 6 | 87 | 401 | 634 | 130,839 | 130,548 |

Per Cent of Active and Idle Machines to Total Reported.

| | | | | | | | |
|----------------|------|------|------|------|------|------|------|
| Jan. 1, 1923: | | | | | | | |
| Active | 81.1 | 82.7 | 84.9 | 85.2 | 83.1 | 84.5 | 89.2 |
| Idle | 18.9 | 17.3 | 15.1 | 14.8 | 16.9 | 15.5 | 10.8 |
| Dec. 1, 1922: | | | | | | | |
| Active | 80.8 | 82.0 | 84.3 | 85.7 | 87.0 | 84.4 | 90.0 |
| Idle | 19.2 | 18.0 | 15.7 | 14.3 | 13.0 | 15.6 | 10.0 |
| Nov. 1, 1922: | | | | | | | |
| Active | 77.1 | 79.1 | 83.2 | 85.8 | 86.8 | 84.4 | 89.1 |
| Idle | 22.9 | 20.9 | 16.8 | 14.2 | 13.2 | 15.6 | 10.9 |
| Oct. 1, 1922: | | | | | | | |
| Active | 72.4 | 76.4 | 82.0 | 86.2 | 78.3 | 84.7 | 81.4 |
| Idle | 27.6 | 23.6 | 18.0 | 13.8 | 21.7 | 15.3 | 18.6 |
| Sept. 1, 1922: | | | | | | | |
| Active | 64.7 | 67.5 | 79.2 | 84.3 | 76.0 | 82.9 | 74.8 |
| Idle | 35.3 | 32.5 | 20.8 | 15.7 | 24.0 | 17.1 | 25.2 |
| Aug. 1, 1922: | | | | | | | |
| Active | 64.1 | 71.5 | 78.2 | 85.2 | 73.1 | 83.7 | 68.0 |
| Idle | 35.9 | 28.5 | 21.8 | 14.8 | 26.9 | 16.3 | 32.0 |
| July 1, 1922: | | | | | | | |
| Active | 63.6 | 66.6 | 78.2 | 85.8 | 75.0 | 85.7 | 68.1 |
| Idle | 36.4 | 33.4 | 21.8 | 14.2 | 25.0 | 14.3 | 31.9 |
| June 1, 1922: | | | | | | | |
| Active | 62.7 | 64.7 | 77.9 | 86.1 | 72.9 | 85.5 | 66.7 |
| Idle | 37.3 | 35.3 | 22.1 | 13.9 | 27.1 | 14.5 | 33.3 |
| May 1, 1922: | | | | | | | |
| Active | 60.3 | 64.0 | 79.2 | 83.6 | 70.3 | 82.7 | 61.6 |
| Idle | 39.7 | 36.0 | 20.8 | 16.4 | 29.7 | 17.3 | 38.4 |
| April 1, 1922: | | | | | | | |
| Active | 65.1 | 72.2 | 79.2 | 83.6 | 76.3 | 82.5 | 74.7 |
| Idle | 34.9 | 27.8 | 20.8 | 16.4 | 23.7 | 17.5 | 25.3 |
| March 1, 1922: | | | | | | | |
| Active | 68.5 | 72.9 | 78.8 | 81.9 | 86.4 | 79.9 | 85.6 |
| Idle | 31.5 | 27.1 | 21.2 | 18.1 | 13.6 | 20.1 | 14.4 |
| Feb. 1, 1922: | | | | | | | |
| Active | 65.7 | 72.8 | 77.6 | 74.0 | 81.7 | 73.0 | 85.7 |
| Idle | 34.3 | 27.2 | 22.4 | 26.0 | 18.3 | 27.0 | 14.3 |
| Jan. 1, 1922: | | | | | | | |
| Active | 69.7 | 78.8 | 73.8 | 74.1 | 81.5 | 74.9 | 87.0 |
| Idle | 30.3 | 21.2 | 26.2 | 25.9 | 18.5 | 25.1 | 13.0 |

Active and Idle Machine and Spindle Hours.

| | Looms | | | Sets of Cards | Combs | Spinning Spindles | |
|----------------|--|----------------------------------|----------------------|---------------------|---------|-------------------|-------------|
| | Wider than 50 inch reed space | 50 inch reed space or less | Carpet and rug | | | Woolen | Worsted |
| Jan 1, 1923: | | | | | | | |
| Active..... | 10,923,787 | 2,682,877 | 1,646,660 | 1,396,753 | 556,182 | 437,675,474 | 495,271,607 |
| Idle..... | 2,001,771 | 978,549 | 329,855 | 83,254 | (3) | 45,746,943 | 7,215,583 |
| Dec. 1, 1922: | | | | | | | |
| Active..... | 10,930,691 | 2,738,398 | 1,678,638 | 1,442,807 | 640,199 | 455,814,257 | 518,683,393 |
| Idle..... | 2,735,632 | 1,028,357 | 325,912 | 96,497 | (2) | 52,079,337 | 35,029,715 |
| Nov. 1, 1922: | | | | | | | |
| Active..... | 10,516,905 | 3,018,524 | 1,677,567 | 1,454,467 | 580,449 | 453,726,162 | 495,918,995 |
| Idle..... | 2,860,390 | 865,473 | 590,675 | 96,875 | (1) | 46,843,907 | 31,861,175 |
| Oct. 1, 1922: | | | | | | | |
| Active..... | 9,787,221 | 2,686,907 | 1,532,229 | 1,421,816 | 577,163 | 447,398,338 | 452,757,539 |
| Idle..... | 3,726,493 | 1,080,258 | 361,045 | 135,151 | 41,983 | 60,386,435 | 86,061,493 |
| Sept 1, 1922: | | | | | | | |
| Active..... | 8,777,605 | 2,385,586 | 1,599,905 | 1,430,601 | 501,856 | 448,267,280 | 398,357,135 |
| Idle..... | 5,023,528 | 1,705,249 | 482,377 | 180,963 | 85,028 | 71,716,578 | 159,693,451 |
| Aug. 1, 1922: | | | | | | | |
| Active..... | 8,604,248 | 2,212,307 | 1,337,616 | 1,314,001 | 437,565 | 415,176,733 | 334,697,998 |
| Idle..... | 5,103,970 | 1,329,867 | 563,049 | 175,857 | 106,406 | 67,744,071 | 171,409,098 |
| July 1, 1922: | | | | | | | |
| Active..... | 8,784,698 | 2,381,640 | 1,450,689 | 1,446,157 | 465,557 | 464,838,476 | 373,695,586 |
| Idle..... | 4,986,846 | 1,595,092 | 560,233 | 143,457 | 107,764 | 52,262,756 | 172,050,612 |
| June 1, 1922: | | | | | | | |
| Active..... | 8,359,940 | 2,231,116 | 1,500,467 | 1,378,534 | 432,420 | 446,034,005 | 341,173,971 |
| Idle..... | 5,039,361 | 1,808,864 | 486,681 | 157,895 | 113,390 | 57,269,048 | 181,444,199 |
| May 1, 1922: | | | | | | | |
| Active..... | 7,556,693 | 2,024,205 | 1,409,141 | 1,282,038 | 388,050 | 413,565,793 | 303,809,040 |
| Idle..... | 5,373,871 | 1,769,559 | 474,509 | 205,283 | 145,638 | 74,009,840 | 185,264,960 |
| April 1, 1922: | | | | | | | |
| Active..... | 8,985,798 | 2,632,330 | 1,612,504 | 1,425,696 | 488,727 | 499,179,647 | 394,529,290 |
| Idle..... | 5,245,745 | 1,516,189 | 449,496 | 187,972 | 104,837 | 81,835,700 | 162,804,609 |
| March 1, 1922: | | | | | | | |
| Active..... | 8,167,472 | 2,501,046 | 1,364,100 | 1,214,734 | 498,641 | 388,697,292 | 395,989,552 |
| Idle..... | 4,234,564 | 1,172,735 | 410,164 | 224,598 | 14,142 | 87,399,614 | 83,092,461 |
| Feb. 1, 1922: | | | | | | | |
| Active..... | 8,557,138 | 2,685,854 | 1,441,375 | 1,140,427 | 534,383 | 369,270,627 | 440,128,487 |
| Idle..... | 4,653,146 | 1,262,044 | 453,296 | 372,566 | 20,607 | 125,863,499 | 71,248,030 |
| Jan. 3, 1922: | | | | | | | |
| Active..... | 9,297,631 | 2,754,376 | 1,394,068 | 1,147,226 | 555,796 | 385,494,803 | 463,843,198 |
| Idle..... | 4,563,995 | 1,061,882 | 587,563 | 426,717 | 7,876 | 132,380,603 | 74,414,700 |

Per Cent of Active and Idle Hours to Total Reported (Maximum Single Shift Capacity).

| | | | | | | | |
|----------------|------|------|------|------|-------|------|------|
| Jan. 1, 1923: | | | | | | | |
| Active | 84.5 | 73.3 | 83.3 | 94.4 | 103.8 | 90.5 | 98.6 |
| Idle | 15.5 | 26.7 | 16.7 | 5.6 | (3) | 9.5 | 1.4 |
| Dec. 1, 1922: | | | | | | | |
| Active | 80.0 | 72.7 | 83.7 | 93.7 | 111.4 | 89.7 | 93.7 |
| Idle | 20.0 | 27.3 | 16.3 | 6.3 | (2) | 10.3 | 6.3 |
| Nov. 1, 1922: | | | | | | | |
| Active | 78.6 | 77.7 | 74.0 | 93.8 | 106.4 | 90.6 | 94.0 |
| Idle | 21.4 | 22.3 | 26.0 | 6.2 | (1) | 9.4 | 6.0 |
| Oct. 1, 1922: | | | | | | | |
| Active | 72.4 | 71.3 | 80.9 | 91.3 | 93.2 | 88.1 | 84.0 |
| Idle | 27.6 | 28.7 | 19.1 | 8.7 | 6.8 | 11.9 | 16.0 |
| Sept. 1, 1922: | | | | | | | |
| Active | 63.6 | 58.3 | 76.8 | 88.8 | 85.5 | 86.2 | 71.4 |
| Idle | 36.4 | 41.7 | 23.2 | 11.2 | 14.5 | 13.8 | 28.6 |
| Aug. 1, 1922: | | | | | | | |
| Active | 62.8 | 62.5 | 70.4 | 88.2 | 80.4 | 86.0 | 66.1 |
| Idle | 37.2 | 37.5 | 29.6 | 11.8 | 19.6 | 14.0 | 33.9 |
| July 1, 1922: | | | | | | | |
| Active | 63.8 | 59.9 | 72.1 | 91.0 | 81.2 | 89.9 | 68.5 |
| Idle | 36.2 | 40.1 | 27.9 | 9.0 | 18.8 | 10.1 | 31.5 |
| June 1, 1922: | | | | | | | |
| Active | 62.4 | 55.7 | 75.5 | 89.7 | 79.2 | 88.6 | 65.3 |
| Idle | 37.6 | 44.3 | 24.5 | 10.3 | 20.8 | 11.4 | 34.7 |
| May 1, 1922: | | | | | | | |
| Active | 58.4 | 53.4 | 74.8 | 86.2 | 72.7 | 84.8 | 62.1 |
| Idle | 41.6 | 46.6 | 25.2 | 13.8 | 27.3 | 15.2 | 37.9 |
| April 1, 1922: | | | | | | | |
| Active | 63.1 | 63.5 | 78.2 | 88.4 | 82.3 | 85.9 | 70.8 |
| Idle | 36.9 | 36.5 | 21.8 | 11.6 | 17.7 | 14.1 | 29.2 |
| March 1, 1922: | | | | | | | |
| Active | 65.9 | 68.1 | 76.9 | 84.4 | 97.2 | 81.6 | 82.7 |
| Idle | 34.1 | 31.9 | 23.1 | 15.6 | 2.8 | 18.4 | 17.3 |
| Feb. 1, 1922: | | | | | | | |
| Active | 64.8 | 68.0 | 76.1 | 75.4 | 96.3 | 74.6 | 86.1 |
| Idle | 35.2 | 32.0 | 23.9 | 24.6 | 3.7 | 25.4 | 13.9 |
| Jan. 3, 1922: | | | | | | | |
| Active | 67.1 | 72.2 | 70.3 | 72.9 | 98.6 | 74.4 | 86.2 |
| Idle | 32.9 | 27.8 | 29.7 | 27.1 | 1.4 | 25.6 | 13.8 |

- (1) Overtime reported was sufficient to offset all idle hours and leave an excess of 34,775 hours or 6.4%.
- (2) Overtime reported was sufficient to offset all idle hours and leave an excess of 65,380 hours or 11.4%.
- (3) Overtime reported was sufficient to offset all idle hours and leave an excess of 20,427 hours or 3.8 %.

WOOL STOCKS AND CONSUMPTION.

BELOW we print our quarterly report (compiled from figures collected by the Bureau of the Census and the Bureau of Agricultural Economics) showing the quantity of wool reported to be in the hands of the domestic wool dealers and manufacturers as of September 30, 1922. This is the second report issued by the Bureau of the Census since the work was given up by the Bureau of Markets and taken over by the former. The break in the continuity of these reports between September 30, 1921 and June 30, 1922 (in which period the reports as of December 31, 1921 and March 31, 1922 were not issued) will never be bridged over, inasmuch as no effort to collect the needed figures will be made. To supply this lack, the best method is to use the figures for the quarter immediately preceding and the quarter following the missing reports, to get, by an average, an approximation of the stocks on hand at the dates mentioned, had the usual reports been made and issued. This cannot be exact and it but emphasizes the regret that any break in these reports occurred and so long a time elapsed between the last report issued by the Bureau of Markets and the first one issued by the Bureau of the Census.

We are informed by Mr. George T. Willingmyre, in charge of the Wool Marketing and Standardization Work of the Bureau of Agricultural Economics, that the first joint report issued by the Bureau of the Census and the Bureau of Agricultural Economics "included at a very conservative estimate 90 per cent of the wools centralized by growers for collective selling" and that "the reports have always covered at least 80 per cent of the wool centralized by growers and appearing under the heading, 'Dealers'. This was done in view of the fact that most of the State wool selling agencies consign their wools to commission warehouses, or employ the services of the wool merchant to dispose of their wool. In all of those cases the wool centralized by growers was included in the dealers stocks," the admission being made that "it is impracticable to learn definitely just what portion of those dealers' stocks represented dealers' holdings and growers' holdings." Mr. Willingmyre states that all the data on

collective wool holdings by growers, as well as that held in warehouses licensed under the United States Warehouse Act, will appear in dealers' stocks. The holdings of growers at local points will be shown in the summary under the heading "Other Cities." Where wools are consigned by individual growers, local associations, and state-wide wool marketing associations, the quantities will be shown in the cities where the wool is held, if they happen to be in cities listed as principal markets.

These reports of stocks, taken in connection with the monthly reports of wool consumed and those of active and idle machinery give a very clear idea of the condition of the industry from time to time.

WOOL STOCKS SEPTEMBER 30, 1922 AS REPORTED BY DEALERS
AND MANUFACTURERS.

(All quantities in pounds).

| As reported by 394 Dealers and 631 Manufacturers. | Held by | | Total. | Estimated Equivalent Grease Wool. |
|--|----------------|---------------------|----------------|--|
| | Dealers. | Manufac- turers. | | |
| | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds</i> |
| Grease Wool: | | | | |
| Domestic..... | 94,155,656 | 57,771,665 | 151,927,321 | |
| Foreign..... | 82,221,187 | 133,579,613 | 215,800,800 | |
| Total..... | 176,376,843 | 191,351,278 | 367,728,121 | 367,728,121 |
| Scoured Wool: | | | | |
| Domestic..... | 5,485,829 | 10,773,704 | 16,259,533 | |
| Foreign..... | 11,034,955 | 9,561,972 | 20,596,927 | |
| Total..... | 16,520,784 | 20,335,676 | 36,856,460 | 73,712,920 |
| Pulled Wool: | | | | |
| Domestic..... | 3,855,928 | 5,613,589 | 9,469,517 | |
| Foreign..... | 3,528,148 | 3,072,889 | 6,601,037 | |
| Total..... | 7,384,076 | 8,686,478 | 16,070,554 | 21,427,405 |
| Total grease, scoured and pulled: | | | | 462,868,446 |
| Tops..... | 3,326,693 | 19,227,453 | 22,554,146 | 45,108,292 |
| Noils..... | 2,694,761 | 5,903,679 | 8,598,440 | 17,196,880 |
| Grease equivalent of all wool re- ported above..... | | | | 525,173,618 |

STOCKS OF WOOL, TOPS, AND NOILS HELD BY DEALERS ON
SEPTEMBER 30, 1922, BY CITIES.

(All quantities in pounds).

| City | Total. | Grease. | Scoured. | Pulled. | Tops. | Noils. |
|-----------------------|-------------|-------------|------------|-----------|-----------|-----------|
| Total..... | 206,303,157 | 176,376,843 | 16,520,784 | 7,384,076 | 3,326,693 | 2,694,761 |
| Boston..... | 127,517,286 | 108,526,894 | 12,384,407 | 3,035,772 | 2,758,531 | 811,682 |
| Philadelphia..... | 28,554,899 | 22,233,655 | 2,671,015 | 1,725,061 | 403,044 | 1,522,124 |
| Chicago..... | 12,575,341 | 11,239,849 | 445,294 | 769,698 | 20,500 | 100,000 |
| St. Louis..... | 11,995,923 | 11,937,886 | 54,037 | ..... | 4,000 | ..... |
| New York..... | 9,119,502 | 7,685,067 | 484,767 | 921,568 | 28,100 | ..... |
| San Francisco..... | 1,786,706 | 1,465,145 | 103,496 | 218,065 | ..... | ..... |
| Portland, Oregon..... | 1,322,034 | 1,139,707 | 176,327 | 6,000 | ..... | ..... |
| Other Cities..... | 13,431,466 | 12,148,640 | 201,441 | 707,912 | 112,518 | 260,955 |

STOCKS OF WOOL, TOPS, AND NOILS HELD BY MANUFACTURERS ON
SEPTEMBER 30, 1922, BY SECTIONS.

(All quantities in pounds).

| Section | Total | Grease. | Scoured. | Pulled. | Tops. | Noils. |
|-----------------------|-------------|-------------|------------|-----------|------------|-----------|
| Total. | 245,504,564 | 191,351,278 | 20,335,676 | 8,686,478 | 19,227,453 | 5,903,679 |
| New England. | 117,412,141 | 88,681,857 | 11,726,485 | 4,577,392 | 9,491,217 | 2,935,190 |
| Middle Atlantic. | 106,592,685 | 88,684,052 | 5,028,969 | 3,180,869 | 7,517,501 | 2,181,294 |
| Pacific Coast. | 2,501,855 | 1,999,610 | 358,622 | 86,473 | 5,927 | 51,223 |
| All other. | 18,997,883 | 11,985,759 | 3,221,600 | 841,744 | 2,212,808 | 735,972 |

FOREIGN WOOL AFLOAT TO THE UNITED STATES ON SEPTEMBER 30, 1922,
BY GRADE.

(All quantities in pounds).

| Grade. | Total. | Grease. | Scoured. | Pulled. |
|---------------------------|------------|-----------|----------|---------|
| Total. | 10,749,106 | 9,984,084 | 471,355 | 293,667 |
| Fine. | 500,760 | 327,032 | 173,728 | ..... |
| $\frac{1}{2}$ blood. | 219,493 | 129,085 | 75,000 | 15,408 |
| $\frac{3}{8}$ blood. | 847,270 | 732,061 | 106,840 | 8,369 |
| $\frac{1}{4}$ blood. | 929,824 | 826,037 | 103,787 | ..... |
| Low or Lincoln. | 2,020,000 | 2,008,000 | 12,000 | ..... |
| Carpet. | 6,231,759 | 5,961,869 | ..... | 269,890 |

**WOOL STOCKS DECEMBER 31, 1922 AS REPORTED BY DEALERS
AND MANUFACTURERS.**

(All quantities in pounds).

| As reported by 412 Dealer and 636 Manufacturers. | Held by | | Total. | Estimated Equivalent Grease Wool. |
|--|--------------------|---------------------|--------------------|--|
| | Dealers. | Manufac- turers. | | |
| | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i> |
| Grease Wool: | | | | |
| Domestic..... | 42,027,619 | 54,176,813 | 96,204,432 | |
| Foreign..... | 92,616,814 | 139,315,525 | 231,932,339 | |
| Total..... | 134,644,433 | 193,492,338 | 328,136,771 | 328,136,771 |
| Scoured Wool: | | | | |
| Domestic..... | 6,382,169 | 11,687,358 | 18,069,527 | |
| Foreign..... | 15,767,706 | 8,908,580 | 24,676,286 | |
| Total..... | 22,149,875 | 20,595,938 | 42,745,813 | 85,491,626 |
| Pulled Wool: | | | | |
| Domestic..... | 6,453,258 | 5,656,593 | 12,109,851 | |
| Foreign..... | 4,652,929 | 3,167,518 | 7,820,447 | |
| Total..... | 11,106,187 | 8,824,111 | 19,930,298 | 26,573,730 |
| Total grease, scoured and pulled: | | | | 440,202,127 |
| Tops..... | 3,658,054 | 20,210,953 | 23,869,007 | 47,738,014 |
| Noils..... | 6,157,345 | 7,644,377 | 13,801,722 | 27,603,444 |
| Grease equivalent of all wool re- ported above..... | | | | 515,543,585 |

**STOCKS OF WOOL, TOPS, AND NOILS HELD BY DEALERS ON
DECEMBER 31, 1922, BY CITIES.**

(All quantities in pounds).

| City. | Total. | Grease. | Scoured. | Pulled. | Tops. | Noils. |
|--------------------|--------------------|--------------------|-------------------|-------------------|------------------|------------------|
| Total..... | 177,715,894 | 134,644,433 | 22,149,875 | 11,106,187 | 3,658,054 | 6,157,345 |
| Boston..... | 117,552,127 | 89,832,992 | 17,266,687 | 4,792,715 | 3,012,821 | 2,646,912 |
| Philadelphia..... | 23,203,634 | 15,615,541 | 3,076,681 | 1,901,032 | 255,979 | 2,354,401 |
| New York..... | 12,847,539 | 11,392,876 | 441,595 | 1,013,068 | | |
| Chicago..... | 9,345,949 | 5,690,695 | 967,810 | 2,159,444 | | 528,000 |
| St. Louis..... | 4,023,128 | 3,963,884 | 59,244 | | | |
| San Francisco..... | 1,679,519 | 1,256,402 | 153,355 | 269,762 | | |
| Portland, Ore..... | 543,236 | 515,248 | 27,988 | | | |
| Other Cities..... | 8,520,762 | 6,376,795 | 156,515 | 970,166 | 389,254 | 628,032 |

STOCKS OF WOOL, TOPS, AND NOILS HELD BY MANUFACTURERS ON
DECEMBER 31, 1922, BY SECTIONS.

(All quantities in pounds).

| Section. | Total. | Grease. | Scoured. | Pulled. | Tops. | Noils. |
|---------------------------|-------------|-------------|------------|-----------|------------|-----------|
| Total | 250,767,717 | 193,492,338 | 20,595,938 | 8,824,111 | 20,210,953 | 7,644,377 |
| New England | 120,773,633 | 90,551,337 | 11,617,717 | 4,539,785 | 10,143,313 | 3,921,481 |
| Middle Atlantic | 104,434,531 | 86,459,180 | 4,299,632 | 3,000,251 | 8,054,861 | 2,620,607 |
| Pacific Coast | 2,563,905 | 1,866,899 | 552,756 | 54,404 | 4,004 | 85,842 |
| All other | 22,995,648 | 14,614,922 | 4,125,833 | 1,229,671 | 2,008,775 | 1,016,447 |

FOREIGN WOOL AFLOAT TO THE UNITED STATES ON DECEMBER 31, 1922
BY GRADE.

(All quantities in pounds).

| Grade. | Total. | Grease. | Scoured. | Pulled. |
|-------------------------------|------------|------------|-----------|---------|
| Total | 53,099,871 | 50,314,938 | 2,038,642 | 746,291 |
| Fine | 14,889,268 | 14,464,424 | 422,844 | 2,000 |
| $\frac{1}{8}$ blood | 6,161,282 | 5,717,451 | 438,831 | 5,000 |
| $\frac{3}{8}$ blood | 8,676,275 | 7,876,551 | 478,998 | 320,726 |
| $\frac{1}{4}$ blood | 12,065,139 | 11,416,529 | 638,600 | 10,000 |
| Low or Lincoln | 1,717,450 | 1,670,644 | 46,806 | ..... |
| Carpet | 7,615,457 | 7,194,329 | 12,563 | 408,565 |
| Grade not stated | 1,975,000 | 1,975,000 | ..... | ..... |

WOOL CONSUMED BY MONTHS.

WE print in this number of the Bulletin reports of the quantity of wool consumed by the manufacturers reporting, in the months of August, September, October, November, and December. It will be observed that the average monthly consumption of wool in the grease was approximately at the rate of 50,600,000 pounds, while the average consumption in grease equivalent terms was 54,510,388 pounds. The total wool consumption for the twelve months, grease equivalent, was 654,124,662 pounds, for those making reports. To this total must be added the quantity consumed by the companies not reporting, which, it is estimated, must be at least an average of 10,000,000 pounds per month. It would seem, therefore, that the country's yearly consumption of wool in 1922, notwithstanding the uncertainty created by the discussion and the enactment of a new tariff law, was 734,124,662 pounds which was nearly equal to the great total of 741,718,131 pounds, grease equivalent, consumed during the war year of 1918.

The total of 734,124,662 was reached by adding eighty million pounds for the consumption of those companies which made no report for the last eight months of the year. For the first four months, the Bureau of Markets made estimates for those companies which appear in the figures in the table.

WOOL CONSUMED BY MONTHS.

AUGUST, 1922.

Schedules returned by 618 manufacturers.¹

| | | Grease Equivalent. |
|----------------|-------------------|--------------------|
| In grease..... | 38,901,798 pounds | 38,901,798 pounds |
| Scoured | 7,204,788 " | 14,409,576 " |
| Pulled | 3,021,465 " | 4,028,620 " |
| Total | 49,128,051 " | 57,339,994 " |

(1) The report for this month does not include data from the American Woolen Company; the Camden Woolen Company, Camden, Me.; the Faulkner & Colony Manufacturing Company, Keene, N. H.; the Ottaquechee Woolen Company, Evarts, Vt.; and the Rock Run Mills, Goshen, Ind.

SEPTEMBER, 1922.

Schedules returned by 610 manufacturers.²

| | | Grease Equivalent. |
|-----------------|-------------------|--------------------|
| In grease | 37,528,788 pounds | 37,528,788 pounds |
| Scoured | 7,365,818 " | 14,731,636 " |
| Pulled | 1,882,641 " | 2,510,188 " |
| Total | 46,777,247 " | 54,770,612 " |

OCTOBER, 1922.

Schedules returned by 613 manufacturers.³

| | | Grease Equivalent. |
|-----------------|-------------------|--------------------|
| In grease | 41,878,437 pounds | 41,878,437 pounds |
| Scoured | 7,510,251 " | 15,020,502 " |
| Pulled | 1,787,126 " | 2,382,835 " |
| Total | 51,175,814 " | 59,281,774 " |

NOVEMBER, 1922.

Schedules returned by 615 manufacturers.⁴

| | | Grease Equivalent. |
|-----------------|-------------------|--------------------|
| In grease | 46 026,609 pounds | 46,026,609 pounds |
| Scoured | 7,349,997 " | 14,699,994 " |
| Pulled | 1,939,925 " | 2,586,567 " |
| Total | 55,316 531 " | 63,313,170 " |

DECEMBER, 1922.

Schedules returned by 612 manufacturers..⁵

| | | Grease Equivalent. |
|-----------------|-------------------|--------------------|
| In grease | 41,849,283 pounds | 41,849,283 pounds |
| Scoured | 6,965,336 " | 13,930,672 " |
| Pulled | 1,940,269 " | 2,587,025 " |
| Total | 50,754,888 " | 58,366,980 " |

(2) These figures do not include consumption by the American Woolen Company; Davisville Woolen Company, Davisville, R. I.; Faulkner & Colony Manufacturing Company, Keene, N. H.; Fields Manufacturing Company, Mouth of Wilson, Va.; Louisville Woolen Company, Louisville, Ky.; Ottaquechee Woolen Company, Evarts, Vt.; and Sheble and Kemp, Philadelphia.

(3) Do not include returns from the American Woolen Company; Camden Woolen Company, Camden, Maine; Davisville Woolen Company, Davisville, R. I.; Faulkner and Colony Mfg. Company, Keene, N. H.; Fields Mfg. Co., Mouth of Wilson, Va.; and the Ottaquechee Woolen Company, Evarts, Vt.

(4) The report for this month does not include data from the American Woolen Company; the Faulkner & Colony Manufacturing Company, Keene, N. H.; or Fields Manufacturing Company, Mouth of Wilson, Virginia.

(5) The figures for the month of December, 1922 do not include data for the American Woolen Company, Boston, Mass.; Amoskeag Mfg. Co., Manchester, N. H.; Faulkner & Colony Mfg. Co., Keene, N. H.; or Fields Mfg. Co., Mouth of Wilson, Va.

The monthly consumption of wool, grease equivalent, by the concerns reporting for the twelve months was as follows*:

| | | | |
|---------------|-------------------|----------------|-------------------|
| January..... | 52,280,000 pounds | July..... | 46,902,071 pounds |
| February..... | 53,774,000 " | August..... | 57,339,994 " |
| March..... | 60,368,000 " | September..... | 54,770,612 " |
| April..... | 42,574,000 " | October..... | 59,281,774 " |
| May..... | 52,533,076 " | November..... | 63,313,170 " |
| June..... | 52,620,985 " | December..... | 58,366,980 " |
| Total..... | | 654,124,662 " | |

*Figures prior to May 1922 were compiled and issued by the Department of Agriculture and include estimates for concerns not reporting. Since the work was taken over by the Bureau of Census in June 1922, estimates were abandoned and have not been included for May or subsequent months.

CONSUMPTION OF WOOL BY GEOGRAPHIC SECTIONS.

(All quantities in pounds.)

The consumption of wool by geographic sections for the months from May to November, inclusive, is shown by the tables which follow. It must be remembered by the reader that these totals do not include the consumption of the American Woolen Company, many of whose mills are in New England, and this omission alters very materially the standing of that section.

May, 1922.

| Section. | Total. | Grease. | Scoured. | Pulled. | Grease Equiv- alent.* |
|----------------------|------------|------------|-----------|-----------|-----------------------------|
| Total..... | 43,602,383 | 32,742,075 | 7,965,891 | 2,894,417 | 52,533,080 |
| New England..... | 20,566,681 | 14,897,888 | 4,221,000 | 1,444,793 | 25,272,279 |
| Middle Atlantic..... | 17,097,429 | 14,581,449 | 1,494,080 | 1,021,900 | 18,932,142 |
| Pacific Coast..... | 390,051 | 25,506 | 335,974 | 28,571 | 735,549 |
| Other Sections..... | 5,548,222 | 3,237,232 | 1,911,837 | 399,153 | 7,593,110 |

June, 1922.

| Section. | Total. | Grease. | Scoured. | Pulled. | Grease Equiv- alent.* |
|----------------------|------------|------------|-----------|-----------|-----------------------------|
| Total..... | 43,519,125 | 32,825,807 | 8,306,131 | 2,387,187 | 52,620,985 |
| New England..... | 20,625,205 | 14,394,481 | 4,934,285 | 1,296,439 | 25,991,636 |
| Middle Atlantic..... | 18,398,628 | 15,959,859 | 1,698,619 | 740,150 | 20,343,964 |
| Pacific Coast..... | 425,466 | 69,746 | 281,495 | 74,225 | 731,703 |
| Other Sections..... | 4,069,826 | 2,401,721 | 1,391,732 | 276,373 | 5,553,682 |

July, 1922.

| Section. | Total. | Grease. | Scoured. | Pulled. | Grease Equiv- alent.* |
|----------------------|------------|------------|-----------|-----------|-----------------------------|
| Total..... | 39,331,655 | 30,289,789 | 6,834,691 | 2,207,175 | 46,902,071 |
| New England..... | 18,096,958 | 13,237,637 | 3,760,526 | 1,098,795 | 22,223,749 |
| Middle Atlantic..... | 17,385,303 | 15,039,427 | 1,540,534 | 805,342 | 19,194,284 |
| Pacific Coast..... | 366,838 | 110,630 | 184,528 | 71,680 | 575,259 |
| Other Sections..... | 3,482,556 | 1,902,095 | 1,349,103 | 231,358 | 4,908,778 |

August, 1922.

| Section. | Total. | Grease. | Scoured. | Pulled. | Grease Equiv- alent.* |
|----------------------|------------|------------|-----------|-----------|-----------------------------|
| Total..... | 49,128,051 | 38,901,798 | 7,204,788 | 3,021,465 | 57,339,994 |
| New England..... | 22,634,540 | 17,197,196 | 3,922,261 | 1,515,083 | 27,061,828 |
| Middle Atlantic..... | 22,356,785 | 19,556,884 | 1,630,732 | 1,169,169 | 24,377,240 |
| Pacific Coast..... | 448,649 | 100,351 | 267,791 | 80,507 | 743,276 |
| Other Sections..... | 3,688,077 | 2,047,367 | 1,384,004 | 256,706 | 5,157,650 |

September, 1922.

| Section. | Total. | Grease. | Scoured. | Pulled. | Grease Equiv- alent.* |
|----------------------|------------|------------|-----------|-----------|-----------------------------|
| Total..... | 46,777,247 | 37,528,788 | 7,365,818 | 1,882,641 | 54,770,612 |
| New England..... | 22,904,264 | 17,974,679 | 4,016,994 | 912,591 | 27,225,455 |
| Middle Atlantic..... | 20,144,560 | 17,628,179 | 1,866,669 | 649,712 | 22,227,799 |
| Pacific Coast..... | 378,391 | 60,499 | 246,301 | 71,591 | 648,556 |
| Other Sections..... | 3,350,032 | 1,865,431 | 1,235,854 | 248,747 | 4,668,802 |

October, 1922.

| Section. | Total. | Grease. | Scoured. | Pulled. | Grease Equiv- alent.* |
|----------------------|------------|------------|-----------|-----------|-----------------------------|
| Total..... | 51,175,814 | 41,878,437 | 7,510,251 | 1,787,126 | 59,281,774 |
| New England..... | 24,578,726 | 20,048,312 | 3,846,914 | 683,500 | 28,653,474 |
| Middle Atlantic..... | 21,978,763 | 19,319,513 | 1,944,691 | 714,559 | 24,161,640 |
| Pacific Coast..... | 418,769 | 87,641 | 301,995 | 29,133 | 730,475 |
| Other Sections..... | 4,199,556 | 2,422,971 | 1,416,651 | 359,934 | 5,736,185 |

November, 1922.

| Section. | Total. | Grease. | Scoured. | Pulled. | Grease Equiv- alent.* |
|----------------------|------------|------------|-----------|-----------|-----------------------------|
| Total..... | 55,316,531 | 46,026,609 | 7,349,997 | 1,939,925 | 63,313,170 |
| New England..... | 28,300,853 | 23,364,020 | 4,050,669 | 886,164 | 32,646,911 |
| Middle Atlantic..... | 22,616,127 | 20,097,101 | 1,684,735 | 834,291 | 24,578,959 |
| Pacific Coast..... | 457,719 | 177,373 | 254,080 | 26,266 | 720,554 |
| Other Sections..... | 3,941,832 | 2,388,115 | 1,360,513 | 193,204 | 5,366,746 |

December, 1922.

| | Total. | Grease. | Scoured. | Pulled. | Grease Equiva- lent.* |
|----------------------|------------|------------|-----------|-----------|-----------------------------|
| Total..... | 50,754,888 | 41,849,283 | 6,965,336 | 1,940,269 | 58,366,980 |
| New England..... | 25,432,034 | 20,683,991 | 3,909,061 | 838,982 | 29,620,756 |
| Middle Atlantic..... | 21,147,997 | 18,810,539 | 1,508,780 | 828,678 | 22,933,003 |
| Pacific Coast..... | 444,587 | 131,340 | 294,059 | 19,188 | 745,042 |
| Other Sections..... | 3,730,270 | 2,223,413 | 1,253,436 | 253,421 | 5,068,179 |

*In computing the grease equivalent, 1 pound of scoured is considered equivalent to 2 pounds in the grease; and 1 pound of pulled, to 1 1-3 pounds in the grease.

QUARTERLY REPORT OF THE BOSTON WOOL MARKET FOR
OCTOBER, NOVEMBER, AND DECEMBER, 1922.

DOMESTIC WOOLS. (F. NATHANIEL PERKINS.)

| | 1922. | | | 1921. |
|---|--------------|--------------|--------------|--------------|
| | October | November | December | December |
| OHIO, PENNSYLVANIA, AND WEST VIRGINIA. | | | | |
| (UNWASHED.) | <i>Cents</i> | <i>Cents</i> | <i>Cents</i> | <i>Cents</i> |
| Fine..... | 46 | 46 | 47 | 30 @ 33 |
| $\frac{1}{8}$ Blood..... | 55 | 55 | 55 | 36 @ 37 |
| $\frac{3}{8}$ "..... | 50 | 52 | 54 | 33 @ 35 |
| $\frac{1}{4}$ "..... | 45 | 47 | 50 | 31 @ 32 |
| Fine Delaine..... | 55 | 55 | 57 | 40 @ 41 |
| MICHIGAN, WISCONSIN, NEW YORK, ETC. | | | | |
| (UNWASHED.) | | | | |
| Fine..... | 45 | 45 | 46 | 29 @ 30 |
| $\frac{1}{8}$ Blood..... | 51 | 51 | 52 | 34 @ 35 |
| $\frac{3}{8}$ "..... | 48 | 50 | 52 | 32 @ 33 |
| $\frac{1}{4}$ "..... | 43 | 45 | 48 | 31 @ 32 |
| Fine Delaine..... | 52 | 52 | 55 | 38 @ 39 |
| KENTUCKY AND INDIANA. | | | | |
| (UNWASHED.) | | | | |
| $\frac{3}{8}$ Blood..... | 53 | 53 | 55 | 35 @ 36 |
| $\frac{1}{4}$ "..... | 55 | 56 | 59 | 33 @ 34 |
| Braid..... | 53 | 54 | 56 | 19 @ 20 |
| MISSOURI, IOWA, AND ILLINOIS. | | | | |
| (UNWASHED.) | | | | |
| $\frac{3}{8}$ Blood..... | 48 | 49 | 50 | 31 @ 32 |
| $\frac{1}{4}$ "..... | 43 | 45 | 47 | 29 @ 30 |
| Braid..... | 32 | 33 | 34 | 18 @ 19 |
| TEXAS. | | | | |
| (SCOURD BASIS.) | | | | |
| 12 mos., fine and fine medium.... | 130 | 130 | 135 | 80 @ 85 |
| Spring, fine, and fine medium.... | 120 | 120 | 130 | 67 @ 70 |
| Fall, fine, and fine medium. | 110 | 120 | 120 | 65 @ 67 |
| CALIFORNIA. | | | | |
| (SCOURD BASIS.) | | | | |
| 12 months, fine..... | 105 @ 110 | 110 @ 115 | 115 @ 120 | 80 @ 85 |
| Spring, fine..... | 95 @ 100 | 100 @ 105 | 105 @ 110 | 70 @ 72 |
| Fall, fine..... | 90 @ 95 | 95 @ 100 | 100 @ 105 | 63 @ 65 |
| TERRITORY WOOL: MONT., WYO., | | | | |
| UTAH, IDA., OREGON, ETC. | | | | |
| (SCOURD BASIS.) | | | | |
| Staple, fine, and fine medium.... | 130 | 135 | 140 | 90 @ 92 |
| Clothing, fine, and fine medium.... | 115 | 120 | 125 | 68 @ 72 |
| $\frac{1}{4}$ Blood..... | 110 | 115 | 120 @ 125 | 78 @ 80 |
| $\frac{3}{8}$ "..... | 90 | 95 | 105 | 55 @ 60 |
| $\frac{1}{4}$ "..... | 80 | 85 | 90 | 50 @ 53 |
| NEW MEXICO. | | | | |
| (SCOURD BASIS.) | | | | |
| No. 1..... | 120 @ 125 | 120 @ 125 | 125 @ 130 | 77 |
| No. 2..... | 110 | 110 @ 115 | 110 @ 115 | 65 |
| No. 3..... | 80 @ 85 | 82 @ 90 | 85 @ 90 | 50 |
| GEORGIA AND SOUTHERN. | | | | |
| (UNWASHED.)..... | .... | .... | .... | 25 @ 26 |

DOMESTIC WOOLS.

THE last quarter of the year under review opened with marked activity in all classes of wool. The predicted higher prices for wool fabrics were fully verified and these were reflected in wool values. Spinners and combers were well supplied with orders, those for future delivery being very large. The continued strength in foreign markets was fully reflected on Summer Street. During this period American buyers were much in evidence in foreign markets, especially in London where some of the heaviest operators were buying.

During November business was quiet, although there was a strong undercurrent to values. While there was some talk of contracting for the new clip in the territories, it is doubtful if any very heavy contracts were placed. Not for many years have stocks of domestic wool in Boston been apparently so light as they were at the close of the year. Texas wools moved quickly at strong prices and reports indicated that all wool producing sections were swept clean of their wool.

The year closed with all wools in a very strong position with values firm over the world. With wool machinery well employed and the buying capacity of the ultimate consumer adequate to keep products moving up to normal assured, the new year seems likely to be one of continued healthy business without danger of disturbing recessions in values.

F. NATHANIEL PERKINS.

Boston, Mass.

Jan. 10, 1923.

PULLED WOOLS. (W. A. BLANCHARD.)

| | 1922. | | | 1921. |
|------------------------|--------------|--------------|--------------|--------------|
| | October | November | December | December |
| | <i>Cents</i> | <i>Cents</i> | <i>Cents</i> | <i>Cents</i> |
| Extra, and Fine A..... | 115 @ 125 | 120 @ 130 | 125 @ 135 | 75 @ 85 |
| A Super..... | 100 @ 110 | 105 @ 110 | 105 @ 115 | 65 @ 70 |
| B Super..... | 85 @ 95 | 90 @ 100 | 90 @ 100 | 50 @ 55 |
| C Super..... | 65 @ 75 | 65 @ 75 | 70 @ 80 | 35 @ 40 |
| Fine Combing..... | 105 @ 110 | 105 @ 110 | 105 @ 115 | 65 @ 70 |
| Medium Combing..... | 85 @ 90 | 90 @ 95 | 90 @ 95 | 50 @ 55 |
| Low Combing..... | 70 @ 75 | 75 @ 80 | 75 @ 80 | 35 @ 45 |

PULLED WOOLS.

THE market throughout the quarter has been active and advancing, and at no time has there been any accumulation of pulled wools. At the close, pullers have on hand only their late December pullings and in many instances sales have been made in advance of production. Hence, the stock carried over the turn of the year is unprecedentedly light.

Very little fine wool has been pulled. The reduction of fine-wooled sheep throughout the country has had its effect at slaughtering centers, with the

result of a steadily increased production of B and C supers and of medium and low combings.

The marked advance in the price of supers as compared with that of a year ago is even exceeded by the rise in the price of sheepskins. Packers' pelts which brought \$1.35 in December, 1921, were sold for \$3.00 in December, 1922.

W. A. BLANCHARD.

Boston, Mass.

Jan. 9, 1923.

FOREIGN WOOL — (MAUGER & AVERY.)

Scoured Basis, 1922.

| | 1922. | | | 1921. |
|----------------------------------|---------------|---------------|---------------|---------------|
| | October | November | December | December |
| | <i>Cents.</i> | <i>Cents.</i> | <i>Cents.</i> | <i>Cents.</i> |
| Australian Combing: | | | | |
| Choice..... | 150 | 150 | 150 | 120 |
| Good..... | 135 | 135 | 140 | 100 |
| Average..... | 130 | 130 | 135 | 90 |
| Australian Clothing: | | | | |
| Choice..... | 150 | 150 | 150 | 120 |
| Good..... | 135 | 135 | 140 | 90 |
| Average..... | 130 | 130 | 135 | 75 |
| Sydney and Queensland: | | | | |
| Good Clothing..... | 135 | 135 | 140 | 90 |
| Good Combing..... | 135 | 135 | 140 | 100 |
| Australian Crossbred: | | | | |
| Choice..... | 55 @ 95 | 58 @ 98 | 60 @ 100 | 35 @ 65 |
| Average..... | 52 @ 90 | 53 @ 93 | 55 @ 95 | 30 @ 55 |
| Australian Lambs: | | | | |
| Choice..... | 150 | 150 | 150 | 100 |
| Good..... | 135 | 135 | 135 | 85 |
| Good Defective..... | 125 | 125 | 125 | 60 |
| Cape of Good Hope: | | | | |
| Choice..... | 140 | 145 | 150 | 110 |
| Average..... | 135 | 135 | 140 | 85 |
| Montevideo: | | | | |
| Choice..... | 132 | 133 | 135 | 85 |
| Average..... | 128 | 128 | 130 | 70 |
| Crossbred, Choice..... | 95 | 98 | 100 | 50 |
| English Wools: | | | | |
| Sussex Fleece..... | | | | 105 |
| Shropshire Hogs..... | | | | 90 |
| Yorkshire Hogs..... | | | | 40 |
| Irish Selected Fleece..... | | | | 40 |
| Carpet Wools: | | | | |
| Scotch Highland, White..... | 23 @ 25 | 23 @ 25 | 23 @ 25 | ..... |
| East India, 1st White Joria..... | 55 @ 60 | 55 @ 60 | 55 @ 60 | 35 |
| East India, White Kandahar..... | 50 @ 52 | 50 @ 52 | 50 @ 52 | 32 |
| Donskoi, Washed, White..... |  |  |  | ..... |
| Aleppo, White..... | 35 @ 40 | 35 @ 40 | 35 @ 40 | 35 @ 37 |
| China Ball, White..... | 60 @ 65 | 63 @ 68 | 65 @ 70 | 50 @ 55 |
| China Ball, No. 1, Open..... | 35 @ 40 | 38 @ 40 | 38 @ 40 | 35 @ 38 |
| China Ball, No. 2, Open..... | | | | 20 @ 25 |

FOREIGN WOOL.

THE foreign markets for merino and crossbred wools during the past three months have been advancing steadily, in spite of efforts to keep prices down. The advance has been most marked in fine crossbreds.

Foreign wools have sold in the United States markets at relatively lower prices than in foreign markets, due to the accumulation of early bought wools held in bond until the passage of the present tariff law.

Carpet wool prices at the end of the quarter are stronger and higher.

MAUGER & AVERY.

BOSTON, MASS.

Jan. 2, 1923.

NATIONAL ASSOCIATION
OF
WOOL MANUFACTURERS

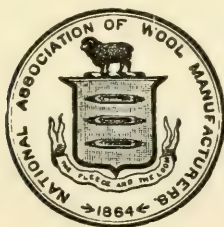
ANNUAL WOOL REVIEW
1922

By JOHN BRUCE McPHERSON

DOMESTIC WOOL CLIP, IMPORTS OF
WOOL AND MANUFACTURES

AND

OTHER STATISTICAL TABLES



PITTSFIELD, MASS.
SUN PRINTING COMPANY

1923

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ANNUAL WOOL REVIEW

FOR 1922

WITH ESTIMATE OF DOMESTIC WOOL PRODUCTION AND OTHER STATISTICAL RECORDS.

BY JOHN BRUCE MCPHERSON

**Issued as Extra No. I to the January Bulletin, National
Association of Wool Manufacturers.**

THE year just closed will be remembered in the annals of the wool growing industry as one of distinct advancement toward a more normal basis. Never did wool growers make a more steady recovery from the depths of dismay and despondency than during the year 1922. Eighteen months ago, if we accept as true the repeated assertions of politicians and many men speaking for wool growers, the latter were on the rapid road to obliteration and destruction. The picture was painted in colors so sombre that there seemed little or no hope for recovery sufficient to save the industry. Happily all the lugubrious predictions proved incorrect and were made by many who did not know or care to know the real reasons for the low prices for commodities or the conditions at work making for a return to normalcy and prosperity.

MANY FACTORS AGAINST IMPROVEMENT WERE AT WORK.

Notwithstanding the many uncertainties caused by discussion and enactment of a new tariff law (which always interfere with business development), a long continued strike of coal miners which began April 1; a widespread strike in the summer of railroad repair shopmen, which greatly interfered with the distribution of coal supplies in all sections of the country, and a long strike in the textile industry in Rhode Island, and in mills in Lawrence, Massachusetts and Manchester, New Hampshire, the year 1922 was one of recovery from the havoc wrought by the four year war period and the subsequent deflation which came with unexpected suddenness and violence. The progress was sure and steady during the twelve months; in fact, in the opinion of some, the gains made in wool prices were altogether too rapid for the permanent good of the industry, considering the peculiar conditions of the clothing market and the opposition of consumers to higher prices for commodities needed by them.

GREAT CONSUMPTION LED TO BELIEF IN HIGHER PRICES FOR WOOL.

That there would be a large demand for wool in this country during 1922 was apparent to observers in the late months of 1921 when the greatly in-

creased consumption and the large inroads made upon the surplus wool supplies, which accumulated during the war, were comprehended, and a scarcity of many grades most desired by the mills became evident. The world's wool consuming machinery was again in motion and the accumulations which had "piled mountain high" in producing countries and seemed to be an inexhaustible surplus, were rapidly being reduced. Coupled with this large consumption was the effect of the Emergency Tariff law which greatly restricted the importation of all classes, except those known as carpet wools and combing wools, the latter under the law's phraseology being imported by some with the belief that they were not subject to the excessive rates of that law and that duties paid under protest would be recovered.

CONTRACTS FOR WOOL WERE MADE EARLY IN THE WEST.

As early as November, 1921, a speculative movement was in evidence, contracts having been made in Nevada, although growers had been urged to hold their clips until shearing time, and although confident predictions of higher wool prices for the approaching year had been made by wool men co-operating with those in charge of wool pools. Such contracts are always a symptom of a speculative movement and an expected stronger demand for wool at higher prices. At the Government wool auction in December, 1921 all of the 7,000,000 pounds offered were eagerly bought at an advance of from 12 to 15 per cent over previous prices.

The belief that prices would rise was strengthened by the statement issued by the Boston Wool Trade Association of the amount of wool held by Boston wool merchants at the close of 1921 which showed stocks less than half those of December 31, 1920. With the above described conditions prevailing, coupled with the knowledge that there was a scarcity throughout the country of fine wools much needed by manufacturers to fill certain demands, the stage was set for a period of speculation and rising prices.

At the Government auction held January 5, at which 8,000,000 pounds were sold, rates were 20 per cent higher than at the December sale. The eagerness with which supplies offered were absorbed at the higher figures realized, created a feeling among many in the wool trade that "the limit was the sky." Undeterred by the debacle of 1920, the reduced prices for fabrics unexpectedly named at the opening of the American Woolen Company in January, and the danger of lower duties being agreed to in the pending tariff bill when enacted than those of the Emergency measure, together with the uncertainty of its passage within a reasonable time, the wool merchants extended their field of operation by entering Utah and making new contracts at steadily rising prices, as much as 25 and 27 cents being paid for fine and fine medium clips.

Compared with the previous year, conditions were greatly different. In 1921 much wool was then for sale in the fleece wool states and the Territory wool sections, whereas in 1922 not only were dealers' stocks abnormally low (about half those of 1921 and one-quarter those of 1919)

but supplies could not be easily secured where before they were fairly plentiful.

At the Government wool auction on February 2, at which about 7,000,000 pounds were sold, prices were 25 per cent higher than those of the sale in January. In February, California wools, pooled for a year or two, were moved at prices ranging from 25 cents to 31 $\frac{3}{4}$ cents per pound and the Arizona wools were practically all taken over by Eastern buyers or manufacturers' representatives, who by this time had entered the field in competition with members of the wool trade.

On March 2, the last of the Government owned wools, 4,000,000 pounds, were sold at auction in Boston, at which time Colonel R. H. Rolfe, the quartermaster in charge of wool sales, stated that up to the armistice in November 1918 the wool administrator had purchased 674,157,554 pounds of wool at a cost of \$478,928,123.34. This vast quantity was sold, notwithstanding unfavorable business conditions, for approximately \$413,392,896, a recovery value of about 85 per cent of the cost, a result not exceeded by any other commodity surplus.

To indicate the great advance in prices between 1921 and 1922, it is only necessary to cite the typical case of the Jericho pool in Utah. In 1921 when the bids for the wools in that pool were opened at the last of April, the best offer was only 16 7-8 cents a pound; in February 1922 all bids for the pool, the highest of which was 36 1-8 cents flat per pound, by the American Woolen Company, were rejected, the wool being sold later for 40 cents a pound.

THE WORSTED BRANCH WAS NOT PROSPEROUS.

Coincident with these rapid developments in the wool trade and the constantly mounting prices for wool, conditions in the worsted manufacture were not what those interested in the industry wished. There had been a very unsatisfactory opening of the worsted season and as there was a considerable surplus of goods in the hands of users and distributors, there was no reasonable prevailing price at which new fabrics could be sold, the buying trend being largely toward woolens, particularly sport styles. Consequently worsteds were a heavy load on the market and the mill managers were disinclined to add to their stocks on hand. Business had been bad all of the Autumn and on February 16 the Arlington Mills, because of lack of orders, started on a working week of four days, there having been considerable short time in the mills for some weeks previous. In the Pacific Mills, the worsted mill went on short time and the last of February practically all of the wool sorters of the Arlington Mills were laid off indefinitely, the plant being operated on a few days per week schedule.

In March the situation grew worse and on March 21 the Pacific Mills and others in Lawrence announced wage reductions, effective on the following Monday, March 27, the announcement bringing on strikes. On that day the Arlington Mills closed because of the unsatisfactory conditions in the goods market and remained closed until August 26, by which time business conditions had considerably improved, the improvement continuing steadily, though slowly, since that time.

THE WOOL CLIP WAS SOLD EARLY EVERYWHERE.

Owing to rapidly advancing prices and the offers made for wool in the West, the clip very soon passed out of the hands of the growers. As early as March it was reported that 75 per cent of the Nevada clip was sold and about 35 per cent of the Utah clip. By the early part of May about 85 per cent of the Oregon wools were reported sold, and by the last of the month it was estimated that except in Texas and New Mexico a large percentage of the Territory wools were either contracted or sold.

A dispatch dated Salt Lake, May 1, and published in the *New York Times* of May 2 stated that "the Shoshone, Idaho wool clip has been sold by a pool headed by Senator Frank R. Gooding and his brother, Frank W. Gooding, at an average price of 30 cents a pound to the B. Harris Wool Company at St. Louis and Salt Lake, it was announced today. The clip consisted of 1,000,000 pounds. The prices paid are more than 100 per cent higher than last year, it was stated."

The *American Sheep Breeder and Wool Grower* for June stated that "the biggest clip in the West was Senator Bob Stanfield's. It included all the fleeces in the Stanfield flocks and the total was around 1,800,000 pounds, and the prices average 25 cents."

The same number of that journal is authority for the statement that "substantial progress was made during May in taking over the new clip, latest estimates being that outside of Texas and New Mexico, the 1922 wools will be 90 per cent sold by the middle of June. The wool market in the Northwest presented a very animated condition during the month of April. After the lull which followed the early contracting of some months ago, buyers got busy all over the territory."

By the last of July the season was practically over in the Far West—except in some sections in New Mexico, Montana, Wyoming, and Texas where there were some accumulations left from sealed bid sales which did not take all the wool in the pools. Three months later when the Montana accumulations were disposed of, little was to be found in any of the large producing states.

THERE WAS NO "WOOL MARKET SCALD" IN THE SEASON OF 1922.

So rapidly did the wools find bidders and so eager were bidders to secure the wools, compulsory branding law advocates had no opportunity to declaim about the "wool market scald" and the ruin the undisclosed use of shoddy was bringing upon the wool growers of the country. These men were compelled to stand mute and their pens were silenced by the events transpiring in their industry and the wool manufacture. The early absorption of the entire domestic clip at prices unbelievable a year earlier proved, as nothing else could have, the baselessness of the accusations against wool manufacturers and the predictions, made by the men engaged in an effort to pass a law minutely regulating one of the country's basic industries, of the ruin which would be caused if the passage of the French-Capper bill should be delayed. Were complaints registered about the unsatisfactory wool prices secured by all who had clips of any grade to sell?

Was anything said about a "wool market scald" where prices increased a hundred per cent in a year, even though the French-Capper bill had not been enacted? If satisfactory prices were obtained for both sheep and wool, can the credit for the great advance be ascribed to the effects produced by the branding bill not yet enacted? Or must the credit for these results, which it was asserted could not be brought about except by the enactment of that bill, be ascribed to other causes and other influences?

CONDITIONS WHICH FAVORED ACCEPTANCE OF THE SPECIOUS APPEAL.

In the light of the past year's experience it may be well to recall that the demand for this legislation has been vigorously pressed during and since 1920 when wool growers were suffering, in common with many other classes, from the effects of an extraordinarily severe price deflation. It was a time when owing to the maladjustment of prices consumers were obliged to pay what seemed to be inordinately high charges for clothes made from materials purchased at extravagant cost and made by operatives receiving the highest wages ever paid in this country for that kind of work. It was a time also, when taxes of all kinds were burdensome and added greatly to the heavy cost of manufacture. Two causes: Low prices for wool and high prices for clothing made from fabrics, the inferior raw materials for which were doled out by the Government to manufacturers, made wool growers and wearers of this clothing willing to believe and accept a proposal for any legislation holding out a hope for relief from what seemed to them a burdensome situation. Not concerned about convincing evidence of the accuracy of a propaganda with a popular, though specious, appeal, they eagerly accepted as true grossly exaggerated and unsupported assertions that the use of shoddy had greatly increased in the wool manufacture (the truth being that all official figures of the 1920 census prove its use has been steadily decreasing for twenty years or more and not increasing as has been unceasingly asserted) and that shoddy, the "arch enemy of the wool grower, had killed more sheep than any other cause", and was altogether responsible for the low prices for wool, the high prices of clothing, and for the country's dwindling flocks. These were wild assertions made by men who could do nothing but quote figures, talk of depressed prices, and say, "therefore shoddy is the cause of all our woes, and the cure is the immediate enactment of the French-Capper bill."

THE COMPULSORY TEXTILE BRANDING BILL.

Determined and persistent efforts were made all through the year to secure the enactment of the French-Capper bill requiring the branding of wool textiles to show their fiber content. On January 27 at the National Agricultural Conference in Washington the sub-committee on costs, prices, and adjustments, whose function was to suggest relief from high retail prices, made an incongruous recommendation for the prompt enactment of the French-Capper "Truth-in-Fabric" bill, inasmuch as the admitted purpose of the bill was to bring about higher prices for wool, the raw material from which were made the fabrics and garments against the prices for which the complaints were then being registered.

On February 8, Representative Ramseyer of Iowa introduced a resolution into the House of Representatives for a special rule to bring the bill up for consideration by the Committee of the Whole House on the State of the Union, allowing but ten hours for debate. The resolution was referred to the Committee on Rules where it remained.

In an address, on February 17, before the American Association of Advertising Agencies, President Howard of the American Farm Bureau Federation predicted the passage of the bill "in the near future," and Senator Capper, leader of the Senate agricultural bloc, stated the latter part of February that the Capper bill "is second on the list to be pushed to an early conclusion", saying that "a determined effort will be made to have the bill enacted."

With the Tariff bill, reported by the Finance Committee to the Senate on April 11 on the calendar, all other bills were put on the shelf temporarily and there was no chance for the Capper bill to get out of committee, or if reported, to be forced to passage before the adjournment of Congress soon after the passage of the tariff measure in September.

THREATS AGAINST THOSE OPPOSING THE BILL.

But the propaganda for the bill was steadily pushed by representatives of the many farm organizations at Washington and by the journals committed to the bill's support. In an appeal for funds the *American Sheep Breeder and Wool Grower* said in its October issue: "Put on your brass knuckles for the finish fight for the Capper-French Truth in Fabric bill. Remember the National Sheep and Wool Bureau needs money to grease the wheels. They need a lot of money for the propaganda work. Remember, it is no slush fund; every penny goes into channels that count. * * You will get ten dollars back for every nickle you subscribe. Talk virgin wool to every man and woman you meet."

As the time for Congress to assemble was approaching the editor of the *American Sheep Breeder and Wool Grower* declared in his November issue that "the big noise at the coming session of Congress will be Truth in Fabric legislation," and he threatened after the following fashion members of the House and Senate who know that the bill is vicious, unworkable, and unreasonable: "Woe be unto the Senator or House member who fights such legislation. We don't care a red cent who that party is. If it's Senator Jim Watson of Indiana, he'll go down with the rest of the bunch, and deserves to, unless he changes his present mode of thinking."

This is only one sample of the threats of political action, but pressure was brought to bear upon teachers in state institutions who dared to question the wisdom of the bill and to express an adverse opinion concerning it. Threats were made of loss of position if silence was not observed or a change of attitude was not taken.

At a conference held in Chicago on November 30, of the American Farm Bureau wool committee, a publicity committee consisting of J. B. Wilson of Wyoming, vice president and secretary of the National Sheep and Wool Bureau of America; J. C. Holmes of South Dakota; A. J. Hopkins of the University of Wisconsin, and Samuel R. Guard of the American Farm

Bureau Federation, were appointed to work out a campaign to advance compulsory textile branding legislation. One feature of the plan is to push for enactment of state laws, no fewer than eleven Legislatures having before them bills for such purposes: Texas, Wisconsin, South Dakota, Montana, California, Kansas, Minnesota, Colorado, Ohio, Idaho, and Michigan.

An effort was made in the Autumn to get before the voters of Montana by initiative and referendum a branding bill, but those in charge of the necessary petitions did not secure the required number of signatures and the effort consequently failed.

THE CAPPER BILL REPORTED TO THE SENATE.

Having closed their hearings on the bill more than a year ago with the understanding that samples of cloth should be submitted to the sub-committee (which was done) for tests to determine whether or not officials in any of the scientific bureaus of the Government could declare accurately or approximately their fiber content, the Sub-Committee of the Senate Committee on Interstate Commerce, without having those samples tested, reported the bill on December 20, 1922 to the full committee without any recommendations.

Two days later that Committee, after changing the name to the Wool Woven Fabric Bill, substituting "reworked wool" for "shoddy", striking out the fanciful and ridiculous definition the uninformed amateur framers of the bill devised for shoddy, and permitting manufacturers to tag, instead of requiring them to mark, their products, reported the bill favorably to the Senate.

THE FORDNEY-MCCUMBER TARIFF BILL.

Business of all kinds was much hampered by the tedious delay in the enactment of the tariff bill which was long in the hands of the Finance Committee of the Senate after its passage by the House of Representatives. The uncertainty as to what the rates of duty on wool would finally be, whether they would be levied on the grease basis or on the scoured content, and whether American or foreign valuation would finally be adopted, all caused careful business men to hesitate about commitments in which were involved so many risks of monetary losses.

The Fordney bill which was introduced into the House of Representatives on June 29, 1921, was reported to the House by the Committee on Ways and Means on July 6, 1921, and was passed July 21, 1921 by a vote of 289 to 127.

This bill was the first tariff measure advocated by protectionists in which it was proposed to levy specific duties on the scoured content of imported wool instead of on wool in the grease condition. Another departure was the omission of all the long established and familiar Classes: I, or clothing wools; II, or combing wools, and III, or carpet wools, based upon blood, and the substitution therefor of duties on their scoured content, irrespective of the value of the wool. To overcome the high equivalent ad valorem rates on the cheap wools of low shrinkage, the bill as passed by the House carried a proviso that "none of the foregoing shall pay a higher rate of duty than 35 per cent ad valorem."

It was referred to the Finance Committee of the Senate on July 22, 1921, hearings on it beginning July 25, 1921 and ending January 3, 1922. On July 29, 1921, Senator Gooding of Idaho presented an elaborate amendment (which he intended to offer when the bill was under consideration), containing provisions for the assessment of duties arranged by steps, depending upon the rate of shrinkage, and making the duty on grease wools shrinking not over 10 per cent, 33 cents a pound. These rates ranged downward to 1.6 cents a pound on those shrinking over 93 per cent, making the equivalent duty on a scoured pound range from 35.87 cents to 40 cents a pound. It was a provision which, if adopted, would have made the administration of the law an impossibility when actually applied to imports of millions of pounds each week at the port of Boston alone.

For nearly nine months the bill reposed in the hands of the Finance Committee, from which it was reported on April 11, 1922 with some two thousand amendments. As reported it contained the impossible Gooding amendment, and from it had been stricken the American valuation plan and the proviso of the House that none of the specific rates of duty on wool should be above 35 per cent ad valorem. It also contained a new and perplexing provision concerning carpet wools, which has caused the Treasury officials much trouble to frame regulations for the withdrawal of such wools from the customs. It is a glaring example of the dangers to industry lurking in tariff bills drawn in haste by those without wide experience in manufacture, unversed in drafting bills dealing with highly technical matters, and unskilled in the use of the English language.

For four long months, while business men waited to know how to plan their undertakings, the bill was debated in the Senate. During this time the Gooding amendment disappeared and a flat rate of 33 cents a pound upon the scoured content was adopted by the Senate. The bill was finally passed by the Senate on August 19 and sent to conference on September 11. In conference the duty, except for carpet wools, was reduced from 33 cents to 31 cents a pound, scoured content, and was so fixed in the report as accepted by the Senate on August 19 and by the House on September 15. The bill was signed by President Harding on September 21 and became effective September 22.

At this revision of the tariff, conditions which were perhaps never before encountered, made the work, always difficult, all the more perplexing. The Emergency Tariff law, with its very high rates on wool and insufficient rates on wool manufactures, satisfied the wool growing interests, who secured its passage to meet an emergency as its title indicated. Knowing full well that the rates in the new bill would necessarily be lower than those of the Emergency law they were not interested in having the old supplanted by the new, and did not use the power they had in the Senate to secure an earlier enactment of the measure, being satisfied to have the season's wool clip sold at the high prices ruling the market.

REASONS FOR HIGH PRICES FOR CLOTHING.

Much opposition was aroused against the proposed duties on wool, by clothing manufactures who alleged that the higher rates would mean a greatly increased expenditure by the consuming public for their suits and overcoats. Whether or not the predicted increases will be made remains to be seen, and whether those which seem likely to occur can be charged to the new tariff law cannot now be decided. It is certain, however, that consumers, if they expect reductions in prevailing prices for fabrics or clothing, will be disappointed.

When considering prices for clothing, regardless of the charges which have been made of profiteering in the clothing industry, it is well to remember the conditions in the industry which require either a maintenance of the present high levels or actual increases. Lower prices seem to be out of the question when it is recalled that during the past year prices for many grades of wool have increased a full hundred per cent and that the cheap wools purchased in 1920 and 1921 have been largely, if not altogether, consumed; that wages paid to textile workers are within 22½ per cent of the peak reached during the war, when they were 185.89 per cent above the basic wage of December 31, 1915; that wages paid clothing workers during the war which were raised to a point approximately 300 per cent above the pre-war standards, have not been reduced from that level more than 10 per cent in the Chicago market (where the recent agreement made is to run for three years), and 15 per cent in the Rochester market, while in other markets practically the peak prices are still in force. To these handicaps must be added the burden of greatly increased taxes, both federal and state. It must also be borne in mind that 75 per cent of the cost of clothes represents the cost of materials and labor costs, and that the other 25 per cent must cover overhead charges, rent, taxes, advertising, miscellaneous expenses, and profit.

A curious outcome of the enactment of the new tariff law which was vigorously urged by representatives of agricultural interests, is the attitude taken since the passage of the bill by the American Farm Bureau Federation and some of the agricultural papers of the country. *The National Stockman and Farmer* in citing the estimate of the American Farm Bureau Federation "that while farmers are gaining \$125,000,000 by tariffs on their products, they are losing \$426,000,000 by tariffs on what they buy, a net loss of \$301,000,000," calls attention to the fact that "mainly as the result of the agitation of the Federation and other organizations, the Emergency Tariff was enacted" and "subsequent legislation, so far as it affects agriculture was largely in the hands of the Federation's creature, the Farm Bloc."

THE FARM FEDERATION'S *News Letter* AND THE WOOL TARIFF.

In a series of articles in the *Weekly News Letter* issued by the American Farm Bureau Federation, the following conclusion was reached respecting the wool duty.

Roughly speaking the duty of 31 cents per clean pound is added to the price of wool in our markets. This is equivalent to about 12.7 per grease

pound on the average of domestic wools and means an increase of about \$37,500,000 in growers' receipts, on the assumption that the farm price will be increased in the same amount as the market price. Further assuming that the exact equivalent of the duty is shifted onto the final consumer—which is probably more or less than the truth according to market conditions—the cost to consumers is placed at \$91,000,000, i. e. 31 cents per pound on the total consumption of scoured wool. The farmer probably consumes his per capita share of wool and his increased clothing cost is accordingly figured at 30 per cent of the total cost, or \$27,300,000.

Unquestionably the present tariff act, so far as the duties on raw materials are concerned, is the work of the agricultural interests. This is particularly true of Schedule Eleven, in the framing of which nearly every suggestion made by representatives of wool manufacturers was rejected. Having secured what they wished, the burden now rests upon the wool growers of the country to fulfill their promises to improve their flocks, produce greater clips, and furnish a larger proportion of the wools consumed by our expanding wool manufacture.

As Mr. John H. Rich, Federal Reserve Agent at Minneapolis, said in his report of October 28, 1922:

On September 21 the Fordney-McCumber law went into effect placing a tariff on wool and sheep products which gives the United States sheep grower a great advantage. The sheep growers' best move now appears to be to increase production as rapidly as possible in order that the price of wool may not go to exorbitant heights.

Professor W. C. Coffey, Eastern Vice-President of the National Wool Growers Association, wrote in November:

"I hope the recent tariff legislation will not lead any sheepman to feel that it is not as necessary now to be as careful in the management of his business as it has been in the past."

It is to be hoped, indeed, that with the highest protection in force ever given the wool growing industry that the men engaged in it will appreciate the obligation resting upon them and will increase their flocks, interest new men in sheep, extend the industry in states where too little wool is now grown, and prove to doubters the wisdom of preserving and extending this much needed industry to furnish material to clothe our ever increasing population.

That the tariff law would be impossible of administration if the authorities insisted upon having samples of each importation tested, is shown by the state of the Appraiser's stores in Boston, even under the liberal working rules in effect, prior to December 16 and for a period of three weeks, when it was impossible to receive another bale of wool for examination. Wool was arriving freely and at one time 35,000 bales were awaiting examination. Conditions in Boston were thus described in the *National Wool Grower* by a correspondent who wrote:

One curious outcome of the free [heavy] importation of foreign wool, and illustrating the difficulty of administering the scoured content provision, is that of all the great volume of Australian wool withdrawn from bond since the Fordney-McCumber bill was signed, not a single lot has been finally liquidated, nor can the importers get any satisfaction as to when such liquidation can be expected. Some lots have been nearly all consumed and yet neither the importer nor the manufacturer knows what the

duty should be. In one week over 17,000,000 pounds arrived at the port of Boston. Docks are congested, the customs forces under-manned and over-worked, and in spite of their utmost efforts many thousand bales are still piled on the docks awaiting examination and tentative appraisal.

WOOL POOLS AND CO-OPERATIVE MARKETING.

The movement for selling wool co-operatively through pools, which assumed considerable proportions in 1920 and 1921, lost momentum the past season, very much smaller quantities of wool being pooled in many sections than in the two previous seasons. This was not due to any lessening of effort to enlarge the operations of the pools and to extend the movement, but partly to the very active wool market during the entire season and the satisfactory prices which could be secured everywhere early in the season. The quantities pooled this year look small when compared with those of 1921 because the latter represented in part accumulations from the previous year, which were not sold on account of low prices then prevailing.

Owing to uncompleted tabulation of the pools for 1922 by Mr. C. J. Fawcett, director of wool marketing for the American Farm Bureau Federation, it is not possible at this writing to give detailed information about the total amount of wool pooled, or the quantities in the various state pools. The story, however, is practically the same everywhere, as is shown by reports available from a few states which may be accepted as typical of all. Not only was the quantity of wool pooled smaller, but the manufacturing operations undertaken by managers of some pools the two previous years were either curtailed or abandoned temporarily, if not permanently.

In Maine where the clip is comparatively small, most of the wool is usually sold by the Sheep and Wool Growers Association to dealers, only a small portion of the pool being manufactured into cloth for trousers, suitings, and yarns for sale to members of the Association.

In New Hampshire, where 1400 pounds were pooled in 1920, and 56,000 pounds in 1921, approximately only 23,000 pounds were in the pool of 1922. The decreased consignments were explained by one in touch with the pool "by the fact that quite a number of shippers had a number of years' wool on hand when we pooled a year ago, and also to the fact that the advancing wool market encouraged them [growers] to sell to buyers rather than to wait for the wool pool." Another thought the small amount was because "farmers are not keeping as many sheep and many desired to take advantage of the wool prices offered by buyers and they sold immediately."

The New Hampshire Co-operative Marketing Association, Inc. manufactured in New Hampshire the 56,0000 pounds of wool pooled in 1921 (largely quarter blood), into blankets, suitings, automobile robes, and stockings. Most of the fabrics were sold to a Boston tailor and the other products were disposed of direct to retail dealers and by mail orders to individual buyers.

The 23,000 pounds pooled in 1922 were also manufactured into the same kind of products, and the fabrics were again sold to the Boston tailor. The general manager says that "they have found a fairly good sale for their products, although the price of blankets this year seems to be above the price that the average consumer is willing to pay for them", and a circular letter issued by the Association on September 20, 1922, stated that although "the price of raw wool has increased 100 per cent in the past eight months * * * the Association has only advanced its selling price on the various goods from 10 to 35 per cent."

In Connecticut, where the size of the clip is insignificant, about 250 farmers sent 28,000 pounds of wool to a pool managed by the Connecticut Sheep Breeders Association to be manufactured into 6000 yards of cloth and 600 yards of bed blankets, distributed principally to the contributors to the pool.

MISSOURI'S EDUCATIONAL MOVEMENT.

The pool at St. Joseph, Missouri, contained 340,000 pounds in 1920; 500,000 pounds in 1921, and 50,000 pounds in 1922. The pool of 1920 developed beyond expectations because of market conditions, and in 1921 thousands of pounds which had neither been sold nor pooled the previous year swelled the total for 1921. The decrease in 1922 is attributed by Mr. John McDaniel, manager of the pool, to several causes, but chiefly "to the more active market, buyers bidding near the market value, propaganda sent out by wool buyers, and the expense in handling the proposition."

The manufacturing enterprise was not altogether satisfactory, "no proposition considered fair being received from a mill for custom work." The Association finally "went to buying blankets from a mill and reselling them", but while they got good blankets, they always paid too much for them. For batting, the grease wool was shipped to Chicago for scouring and then reshipped for carding in a local mattress factory. While the making of yarn was fairly satisfactory, because it could be sold at what were considered reasonable prices, the manufacturing enterprise was not attempted in 1922, presumably because of the difficulties encountered in 1921 and also because of the very small amount of wool in the pool.

R. L. Davis of the Sales Department of the Missouri Farm Bureau attributed the falling off in the sales of wool partly to the reduced numbers of sheep on farms, but chiefly to the selling of the wool direct to buyers "for the sellers desired quick returns."

Daniel C. Rogers, Associate Marketing Commissioner of Missouri, thinks more has been done in Missouri during recent years to build up a permanent and efficient wool marketing program than in many of the states, and he believes it means the continued co-operative collection of large quantities of wool for direct sale, after grading, to the large dealer, the Eastern wool merchant, or to the representatives of the mills. The movement in Missouri has not been based entirely upon the idea of higher prices to the wool grower, but emphasis has been placed upon the importance of proper care of sheep, the proper tying of the fleeces, and efficient grading of the clips. The latter, done by experts, has been an

educational experience of great value. Missouri wool growers have seen the grading done and have been instructed about spinning qualities, shrinkage, and the length and diameter of fibre, so that their stock of knowledge has been greatly increased and they have come to believe in their slogan, "Know your wool and market it on a graded basis." The following table gives the results of the grading of 2,117,536 pounds during the last three seasons.

WOOL GRADED IN MISSOURI, SEASONS 1920-1922, INCLUSIVE.

| Grade. | Total Pounds Graded. | Per Cent of total. | Price per pound 1922. |
|------------------------------|----------------------|--------------------|-----------------------|
| | | | <i>Cents.</i> |
| Fine..... | 121,980 | 5.75 | 37-43 |
| $\frac{1}{2}$ blood..... | 155,659 | 7.35 | 35-42 |
| $\frac{3}{8}$ blood..... | 409,062 | 19.31 | 32-39 |
| $\frac{1}{4}$ blood..... | 484,150 | 22.86 | 32-38 |
| Low $\frac{1}{4}$ blood..... | 146,114 | 6.92 | 30-33 |
| Common..... | 42,129 | 1.99 | 31-32 |
| Braid..... | 26,716 | 1.27 | 25-31 |
| Rejects..... | 731,726 | 34.55 | 15-31 |
| Total..... | 2,117,536 | 100.00 | |

Likewise in Illinois the manufacture of blankets, it was stated in a report on blankets at the annual meeting of the Illinois Agricultural Association, "has practically ceased to be a factor in the wool pool, only 2700 pounds of the pool being charged against blankets. More than 3171 blankets from the previous year were carried over, so that the manufacture of additional ones for the season of 1922 was unnecessary."

The New York State Sheep Growers Co-operative Association was organized in 1919 and there are now more than 1650 farmers who take part in this marketing movement. During the season of 1920 and 1921, somewhat more than 1,023,000 pounds of wool were graded and marketed, while during 1922 approximately 533,000 pounds were handled (although the goal set for the year was 1,000,000 pounds), the wools being sold chiefly direct to mills in Philadelphia and Boston.

During the season of 1920 and 1921, the Association had a limited amount of wool manufactured chiefly into blankets because the market was so inactive that members felt it was a good time to acquire some woollen articles for home use. The Association was not organized to manufacture wool, and it therefore discontinued that work as soon as the wool market again became active.

Writing of the work of the Association, Mr. E. L. Moody, its president, says that "we feel that we have been of great service to both growers and the manufacturers in the educational work done in the three years. One thing is certain, the amount of rejects is growing less by this method of

handling wool. We hope to make a reputation for New York State wools that will stand as high in the markets as the best wool from any other section of this country has attained." If the Association secures no other results than the elimination of seedy, burry, cotted, and taggy fleeces and the lessened use of sisal twine in tying the fleeces, it will do a valuable service to the manufacturing industry of the country.

In Michigan as late as October 20, 1921, rosy accounts were published in the daily trade papers of the great things accomplished by the Farm Bureau Cooperative plan for lowering clothing prices and producing "honest truth-in-fabric labeled virgin wool suits, overcoats, blankets, and automobile robes." "Farmers engaged in the manufacture of fabrics," it was stated, "to move wool when it was a drug on the market and to secure their own woolen goods economically." This advantage was shared with the public and twenty-five standard samples of suitings and overcoatings were designed and manufactured. On the cloths alone, purchasers were assured a saving of from \$1.50 to \$3.00 a yard. Tailors were to make the suits for incredibly low prices and purchasers from the Farm Bureau distributors were to save \$35 on the kind of suits, made to order, and \$20, on the kind purchased from ready-to-wear merchants. But all these favorable prospects were not realized, and the announcement has been made that "no wool from the 1922 pool was manufactured into fabrics, principally for the reason that there was a ready sale for the wool at reasonable prices," and also because "a sufficient quantity of fabrics manufactured from the 1921 pool is still on hand."

It is stated by the secretary-manager, however, that "we are still continuing our fabric department under the lines outlined in October, 1920. The last year, however, it has been operated entirely on a cash mail order and local trade basis. It has been running very efficiently, but the comparatively small quantity of wool used has not affected the prices obtained by the farmers for their wool. He also says that "it is our intention to continue the department, however, although what will be the procedure has not yet been determined."

The Michigan pool had the same experience as those in nearly all fleece producing states, at least,—much smaller quantities of wool sent to the pools. In 1920 Michigan was credited with having pooled 3,500,000 pounds, 4,006,850 pounds in 1921 and 320,079 pounds in 1922. Part of this loss was probably due to local conditions and more to the increased prices offered for wool in 1922, by buyers who were in the field paying cash for their purchases. The decrease, Mr. D. Williams, writes, "is no indication that wool pooling in Michigan is not a success. Indications are that more wool will be pooled this coming year than last." Stringent financial conditions and the need for cash moved many, who formerly pooled their clips, to sell for cash rather than to consign. A Michigan paper went so far as to declare that "it is understood that this year's experience will be the last chapter in the history of state-wide pooling of this farm commodity", but if the state-wide pool is to be given up, it is likely that the formation of county units to handle the sales will be undertaken, a movement for that experiment already having been urged.

The Iowa Fleece Wool Pool, conducted by the Iowa Fleece Wool Growers' Association has been operating for three consecutive years. With a membership of approximately 11,500, though the number constantly fluctuates, it received 3,000,000 pounds in 1920, contributed by eight thousand consignors; 2,500,000 pounds in 1921 sent by six thousand consignors, and 700,000 pounds in 1922, sent by twenty five hundred consignors.

The Secretary attributes the much smaller quantity pooled in 1922 "to the very satisfactory price offered early in the season which constantly advanced during the entire year."

In 1920 when the wool markets were greatly depressed, a contract was made "with mills in the central states to manufacture a large quantity of blankets", 25,000 being made and distributed throughout the state. In addition, several thousand pairs of wool socks and hats and "a nice quantity of virgin wool cloth, amounting to about \$175,000 during the past three years were made and sold."

Although the Ohio Sheep and Wool Growers' Association collects large weights of wool from growers in Ohio and neighboring states, it is not a wool pool in the sense in which the term is usually used. It sells the wools consigned to it throughout the season as mills require them, "the sole object being to come in closer contact with the mills and thus eliminate the gathering costs and also the speculative element formerly found in marketing the wools." In 1922 the Association marketed 2,500,000 pounds of Ohio wool, 250,000 pounds from Indiana and 75,000 pounds from Pennsylvania. The expectations for 1923 are that the amount of Ohio wools will be doubled, that "at least 1,500,000 pounds will be received from Indiana and that the consignments from Pennsylvania will be greatly increased." The Association keeps two men in the field to teach the farmer how to put up his wools in a clean, attractive manner and to use paper twine in tying the fleeces.

To avoid the necessity of making consignors to the pool wait for payment until the end of the season, the managers of the Ohio pool put into force a plan by which payment was made on a new basis. The year was divided into three periods as follows: (1) April, May, June, and July; (2) August, September, October and November; (3) December, January, February and March. Wools received during a certain period were treated as a unit, so that all wools of a similar grade and quality received during that period were paid for at the same average price, a large portion of the purchase money being remitted soon after the sale, and the balance at the close of the season.

That the attempt to manufacture any considerable portion of the wool in any pool into fabrics for sale to the public was not the success expected, is not surprising. The purpose of the pool, the co-operative marketing of the wool consigned by its members, is far removed from its manufacture. This requires great skill acquired only after long years of experience and a knowledge of the changeable demands of a fickle market which managers of the pools have not had and can not get, far removed as they are from the seat of the manufacture. It never will succeed because success in manufacture can be achieved only by men having a wide knowledge of the

qualities of many wools and much experience in blending them in manufacture. In no branch of manufacture are there more frequent changes than in the wool manufacture in the styles of fabrics produced to meet the demands of fashions. With such conditions, it is not possible for managers of wool pools with their limited quantities of wool of desirable grades to make fabrics which will meet the requirements of the trade or satisfy the tastes of the purchasing public. This feature of the pools, we say again, is a mistake, can not be successfully carried on, and, in our opinion, will be altogether abandoned in the very near future.

Writing of the season of 1921, Mr. C. J. Fawcett, director of wool marketing for the American Farm Bureau Federation, stated that the amount of wools pooled during the season of 1921 is substantially greater than in 1920, and the movement is making progress in spite of adverse conditions, and that "to judge by results obtained during the season of 1920, when there was absolutely no market for the major portion of the year either in a local way or to the mills, is grossly unfair." Reporting to the American Farm Bureau Federation on December 12, 1922, Mr. Fawcett expressed the opinion that the reduction in the volume of wool pooled this year is temporary, the active market conditions accounting for the reduced quantities sent to the various pools and concentration points. At the seven concentration points, Syracuse, New York; Columbus, Ohio; Lansing, Michigan; Houston, Texas; Chicago, Illinois; Portland, Oregon; and Fargo, North Dakota; a total of 22,289,856 pounds sent by 25,246 consignors was marketed at a gross selling price of 25 cents plus, the average net return to the grower being 20.75 cents, the wool being marketed at an average cost of 2.865 cents, exclusive of freight charges. He reported that "the wool market has increased fully 100 per cent in one year's time, a 40 cent mark having been reached in many sections of the Mid-west at shearing time."

One of the difficulties encountered is the uneven volume of wool received by the concentration points. In the season of 1920 on an inactive market, the volume pooled was great. In the present season of high markets, the volume was greatly reduced. An efficient organization can not be built up under such fluctuating conditions, and he suggested the consideration of a contract binding the grower to consign his wool for a period of years. This contract is used by the pools of Houston, Texas, and Portland, Oregon.

"With each of the seven concentration points maintaining its own selling agency, a certain amount of competition," Mr. Fawcett said, "has developed in the sale of pooled wools which is not altogether for the best interests of the growers. It is quite evident that a united sales agency through which all of the pooled wools could be marketed would afford a more efficient and economical means of distribution." He suggested also that "the truth-in-fabric measure should be prosecuted vigorously until the measure becomes a law or is definitely set aside."

OPINIONS ABOUT WOOL POOLS.

Writing of the wool pool marketing movement, a gentleman identified with it has said:

It is evident that some have the impression that the collective wool marketing associations in the United States have a greater influence in the trade than is indicated by the quantities handled through these channels. In 1920, of course, as no outlet appeared for the growers to market their wool there was a large amount of wool centralized at local points through wool pools and State wool growers associations. The increase in the volume of business handled during 1920 by wool growers associations did not represent an increase, due to the development or spread of this movement in this country, but rather due to the necessity for some means of getting the wool off the farms. In 1921 the movement was not quite so large and, according to authentic advices, it represented only about seven or eight per cent of the total clip of the United States.

An editorial in *The National Stockman and Farmer* for June 3, 1922 stated the case fairly about the movement when it said:

Last year some farmers who refused to pool their wool got more money for it than the poolers got. That caused many poolers of last year to remain outside this year, and now some of them have sold their wool for less than the poolers can get. They have whipsawed themselves, and individually they have furnished another example of the fact that nobody can always hit the high price, regardless of the method of marketing. Too much has been made of the price in all this wool marketing agitation anyhow. The chief advantage of the pool is not the price any individual gets in the pool or outside, but it is the fact that pooled wool is graded and sold according to its value, so that the producer of good wool is rewarded and the producer of inferior wool is penalized; also in the effect that pooling a part of the wool may have on the market for all of it. A few excited poolers have called our attention to the fact that some dealers are now paying more in the country than Boston quotations. They see in that an effort on the part of somebody to bust the pool. Perhaps they see more than there really is in it. Some speculators have always taken chances, sometimes to their profit and sometimes to their sorrow. After last year's experience it is natural that many should sell outside the pool this year. After this year's experience it may be just as natural for them to pool again next year. The new method of marketing should not be judged by one year's experience or two, but many will so judge it. The best system will survive and its occasional bumps will only make it stronger in the end.

ATTEMPT TO FIX PRICES FOR WOOL CONTINUED.

The attempt made in December 1921 by Representative Sinclair of North Dakota to fix prices by legislation was continued in January, 1922 when Senator Ladd, also of North Dakota, introduced into the Senate on the 16th of that month what was practically the Sinclair bill. While the bill's title stated its purpose was "to promote agriculture by stabilizing the prices of certain agricultural products", it was simply an attempt in peace times to re-enact war time legislation.

Minimum prices for wheat, corn, cotton, and wool were to be fixed by the Secretary of Agriculture, the Secretary of Labor, and the Chairman of the Interstate Commerce Commission on the first day of August 1922, 1923, 1924, and 1925, and the corporation intended to be created was directed to purchase the controlled products of the years 1922, 1923, 1924, 1925, and 1926, it being provided that the minimum price in 1922 should be 55 cents at Boston and St. Louis for "wool unwashed", without indicating the grade or quality. The small sum of \$1,000,000,000 was to be appropriated for the use of the Grain Corporation which was to buy and

sell the products mentioned. A witness, Mr. Wanamaker of South Carolina, told the Senate Committee on Agriculture that "Government fixing of prices of farm products alone would save the agricultural industry from bankruptcy." The bill was not enacted and it is needless to say that the industry still survives and is in much stronger financial position than it was a year ago when its sponsor introduced the bill for political reasons. The rising markets for the very products enumerated disclosed the fallacy of the principle on which the bill was constructed, proved that there was no necessity for its enactment, and showed that the law of supply and demand would, if unhampered, lift the agricultural industry out of the depths into which it was plunged by the results of the war's debauch. The agricultural and stock raising industries have weathered the financial storm, and though somewhat battered are facing the future with confidence and hope. It should be clear by this time that politicians have capitalized for their own benefit the farmers' tribulations and distress, and the industries which they were to save with their nostrums are saving themselves without the proffered aid.

WOOL GROWERS MUCH ENCOURAGED.

Owing to the great activity of our wool working machinery during the year (and it was the same in all countries), a great change came over the conditions surrounding both wool growing and wool manufacture. Gloom was dispelled and was followed by courage and hope among the wool growers who, much helped by the greatly increased prices all through the season, found their financial burdens very considerably lightened.

A press despatch in March from Seattle, Washington stated:

The sheep industry is coming back in southeastern Washington and in northeastern Oregon after several years of depression, according to the sheepmen in this region who are encouraged by the better prices for wool and sheep.

In April, Mark J. Smith of the Ohio Farm Bureau Federation was quoted in the *Daily News Record* as having said:

The future looks bright for the sheep and wool growing industry of Ohio, as well as all other parts of the country.

In the December number of the *National Wool Grower*, R. B. Millin of the Montana State College at Bozeman, Montana said:

Prospects are bright for next year for there seems to be no chance that wool will be lower, and feeders admit that they expect to pay from 9 to 10 cents a pound for lambs next fall. If the winter is not too severe and we get a reasonably good lamb crop in the spring, the wool growers of Montana should be in line to recoup some of their heavy losses of recent years.

R. A. Balch, of Spokane wrote:

We have regained our confidence and in part our equilibrium and now have found faith in the future.

In the January number of the *National Wool Grower*, F. L. Ballard of Oregon wrote:

All the sheep districts are optimistic over the general outlook, but not too much so. They deplore any boom tendencies and are all hoping that the industry is on a fairly stable plane which can in a short time fully re-establish it.

The December number of the *American Sheep Breeder and Wool Grower* carried on the front cover a statement of what the year had done for the country's flockmasters, a part of which was:

Old man statistics reports that the occult influence of this super-pedigreed ram of the Zodiac Rancho increased the balance sheet of the ovine industry just to \$400,000,000.

United States Forester, Will C. Barnes, is authority for the following:

Although the sheep industry in the West this year was in bad shape, nevertheless we grazed approximately as many of all kinds of stock as in former years, except, of course, the extremely high points during the war when we did everything possible to stimulate the use of the Forest Ranges. As far as their industry is concerned, the sheep men seem to be getting out of the hole, in which they found themselves two years since, in a very satisfactory way. Some of them, of course, are completely bankrupt and may never again get back into the business. The majority of them, however, are slowly regaining their former status and undoubtedly in the next year or two will be feeling a reasonable share of prosperity.

George M. Wilber of Ohio was quoted in the November number of the *American Sheep Breeder* as saying respecting the prospects of the wool growing industry:

There is the greatest shortage of breeding ewes in America ever known and the industry faces the most prosperous times in the history of America. With the shortage, tariff protection and a sure bet for the French-Capper bill, the demand for lamb, wool and mutton and a large supply of feed of comparatively low market value, the sheepman is, and is going to be, in deep clover.

CONDITIONS IMPROVED GREATLY IN 1922.

In reviewing conditions, Secretary Wallace of the Department of Agriculture stated early in January:

Twelve months ago most of the 6,000,000 farmers of the United States were starting on the long, hard climb out of the valley of economic depression. * * As we look backward we can see that very considerable ground has been gained by the great majority and we can enter the new year with renewed hope and with that courage which comes from the realization that we are really making progress. ** Speaking generally, times are better, much better than a year ago, both for agriculture and for industry. * * The total sum which farmers will receive for the crops this year is greater by a billion and a half dollars or more than that which they received for the crops last year.

And in his annual report for 1922 made at the close of the year, the Secretary wrote that "at the time this report is submitted an encouraging advance in farm prices is being registered and the future looks decidedly more hopeful." Pointing out some of the causes which contributed largely to the abnormal relationship of farm prices to the prices of other things, Secretary Wallace declared that "the success of industrial labor in holding

most of the gains in wages secured during the war period and the two years following, accounts for a considerable part of the higher prices the farmer is now paying for what he buys. Wages of men working in organized industries, including transportation, remain at 50 to 100 per cent above pre-war level and are perhaps within 10 per cent of the high level of 1920.

Considerably higher prices for wool, lambs, and sheep have resulted in pulling the sheep industry out of a slough of despond and setting it on its feet again. This is especially helpful to the industry in the range country."

During the year general business was steadily recovering from the slump of 1920 and 1921. The wool consumption of the country was the highest in the history of the industry, not being exceeded even during the war years when huge amounts were used for army purposes. If this indicates anything, it apparently means that at least a year of prosperity is immediately ahead for the wool growing and wool manufacturing industries of the country, unless some unexpected and disturbing elements appear on the horizon.

At the close of the year organized labor was arranging plans to demand the restoration of the percentage wage cut made in December, 1920. It appeared also that an effort would be made in the New Hampshire and Rhode Island legislatures to secure the enactment of laws limiting the working week for women and children to 48 hours, the movement for increased wages being necessary, should the bills for the short week be passed, to compensate for the loss of pay caused by the fewer hours permitted by the law.

While these plans are being made in this country, it is interesting to learn that the Swiss Federal Council has conceded to certain industries the privilege to abrogate the eight hour law and return to the 52 hour week during the year 1923. This ruling means the practical abandonment of the eight hour day in Switzerland.

WOOL STOCKS AND CONSUMPTION FOR FIVE YEARS.

The accompanying charts with their peculiar vermiform contours will bear some study by those who are statistically inclined. The main points they are designed to bring out are reasonably clear without critical study. In brief, they show relative stocks and consumption, month by month, since such figures have been recorded in this country, not in absolute figures but in relation to that one of the recorded years which is least abnormal.

For the benefit of those who are interested in statistical methods, the process of arriving at these figures and some of the shortcomings inherent in them are explained below in detail. Some of the more obvious points brought out by the series are these:

1. Since 1918 consumption has been almost uniformly below the average for that year both in totals and in imported wools. Consumption of domestic wools exceeded this average for nearly a year from the middle of 1919 to the middle of 1920, and also from the spring of 1921 to the end of 1922.

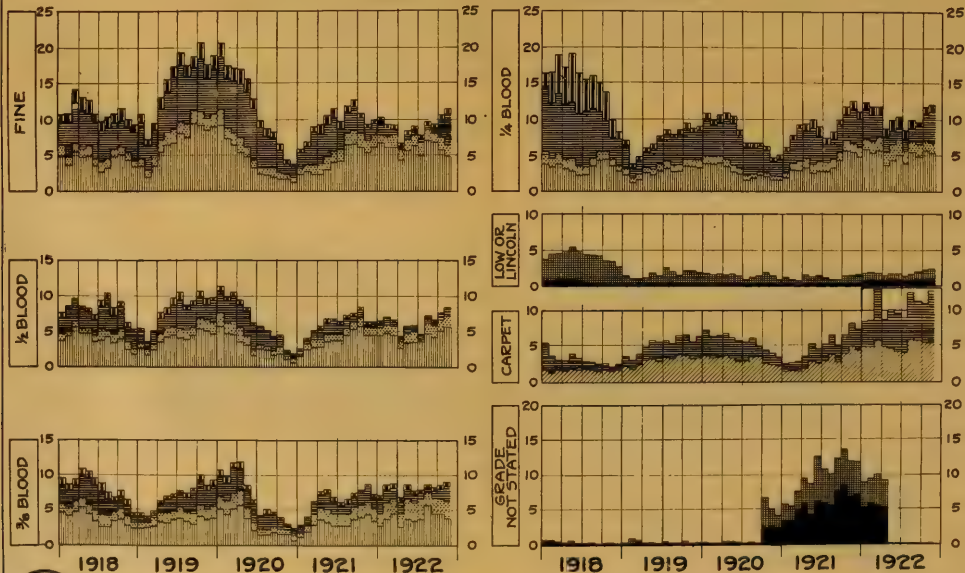
2. Stocks of wool, on the other hand, have run almost uniformly above the average for 1918 (December, 1917, substituted for December, 1918).

WOOL CONSUMPTION IN UNITED STATES

TOTAL OF GREASE, SCOURED AND PULLED WOOLS

FIGURES IN MILLIONS OF POUNDS

NATIONAL ASSOCIATION OF WOOL MANUFACTURERS



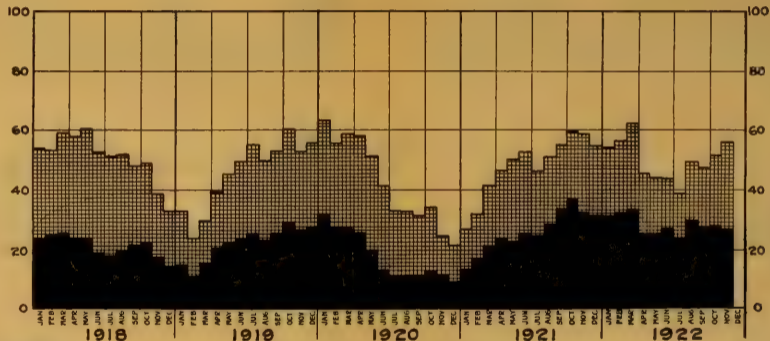
FOREIGN DOMESTIC FOREIGN CLOTHING FOREIGN COMBING FOREIGN FILLING DOMESTIC CLOTHING DOMESTIC COMBING

WOOL CONSUMPTION IN UNITED STATES

TOTAL OF GREASE, SCOURED AND PULLED WOOLS

FIGURES IN MILLIONS OF POUNDS

NATIONAL ASSOCIATION OF WOOL MANUFACTURERS



GRAND TOTAL



FOREIGN



DOMESTIC



GRAPHIC SERVICE
CORPORATION
BOSTON, MASS.
100-41

3. Domestic wools got more than their proportionate share of the consumption since the summer of 1919 except for the year beginning with the spring of 1920.

4. Stocks of domestic wools showed a corresponding depletion during 1919-1920 and by the third quarter of 1921 again headed downward, and at the close of 1922 were practically at the 1918 figures.

5. There has been consistently a more violent fluctuation in consumption than in stocks.

6. The great increase in consumption of fine wools, both foreign and domestic, in the latter part of 1919 and early months of 1920 is clearly shown, as is also the swift reduction of the consumption of those wools in 1920 and the early months of 1921, since which time there has been a partial recovery.

7. Another point not so generally commented on is the course of consumption of imported carpet wools which has been almost continuously above the 100 line, and in the 1920 months of greatest activity showed a proportionate increase greater than that for fine wool consumption.

Since the spring of 1921 the consumption of carpet wools increased very rapidly, reaching in October, 1922 a maximum of 382 per cent of the 1918 base.

This summary of the main points suggests the kind of relations which may be worked out of these curves. For those who care to pursue this matter further, we submit the following explanatory facts which ought to be kept in mind in using the diagrams.

Totals in all cases represent the sum of grease, scoured, and pulled wools, no attempt having been made to convert all to a scoured or grease basis. Approximately 80 per cent of consumption and 82 per cent of stocks are grease wool in most periods.

All data for wool stocks up to and including September 30, 1921 were issued by the Bureau of Markets. No report of stocks for the two quarters ended December 31, 1921 and March 31, 1922 appeared. Reports for the quarter ended June 30, 1922, and all appearing since that time have been issued by the Bureau of the Census.

To cover the hiatus caused by the missing quarterly reports, and to make the graphs continuous over that period, stocks for December 31, 1921 were considered the same as those as of September 30, 1921, and the stocks of March 31, 1922, the same as those reported as of June 30, 1922.

Figures for wool consumption beginning with October, 1920, foreign and domestic, have a large percentage of wool reported consumed but not segregated by grades. Foreign wools, October, 1920, to July, 1921, inclusive, had an average of 18.5 per cent not graded; domestic wools for the same period, 22 per cent; and combined foreign and domestic, 20.2 per cent. While the detailed graphs for wool consumption by grades beginning October 1920 and extending through April 1922, represent actual consumption reported by grades, yet their totals do not equal the grand total for foreign and domestic wools, because the latter included large quantities listed under the head, "Grade not Stated", and estimated by the Bureau of Markets as having been consumed by companies which made no reports of their consumption.

Figures for wool stocks, beginning with those for December 31, 1920, also contain large percentages of wool not segregated by grades. Domestic wools for the covered portion of 1921 averaged nearly 40 per cent ungraded; foreign wools had a negligible quantity except for the 33,000,000 government stocks ungraded in the quarter ended June 30, 1921; and total of domestic and foreign stocks ungraded averaged 23.6 per cent for the three-quarters.

All totals were reduced to index numbers; base 1918 average equals 100. In practically all cases the stocks reported for December 31, 1918, were manifestly abnormally small. Therefore, in determining the 1918 average for stocks in all cases, the figures for stocks as of December 31, 1917, were substituted for those of December 31, 1918. Nevertheless the actual stocks reported December 31, 1918, were used to determine the index numbers for that month.

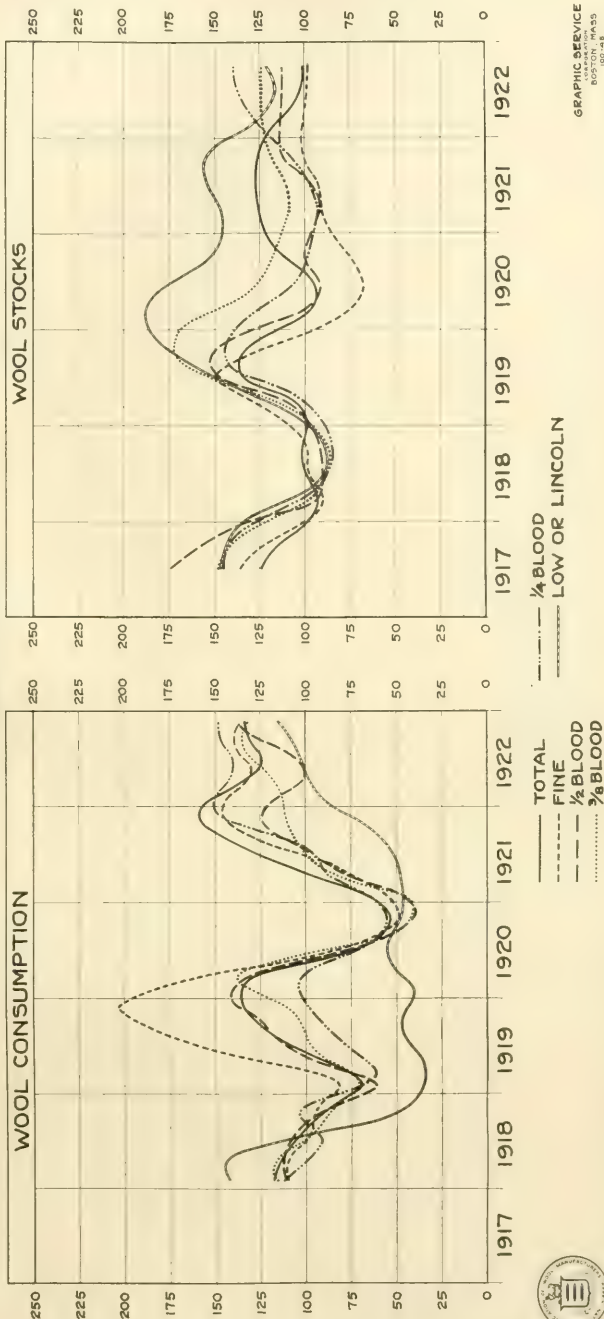
A true mean line was drawn through these relatives, giving a mathematically correct line, smoothing it out and giving better indications of tendencies.

WOOL CONSUMPTION AND STOCKS IN UNITED STATES

TOTAL GREASE, SCOURED AND PULLED WOOLS

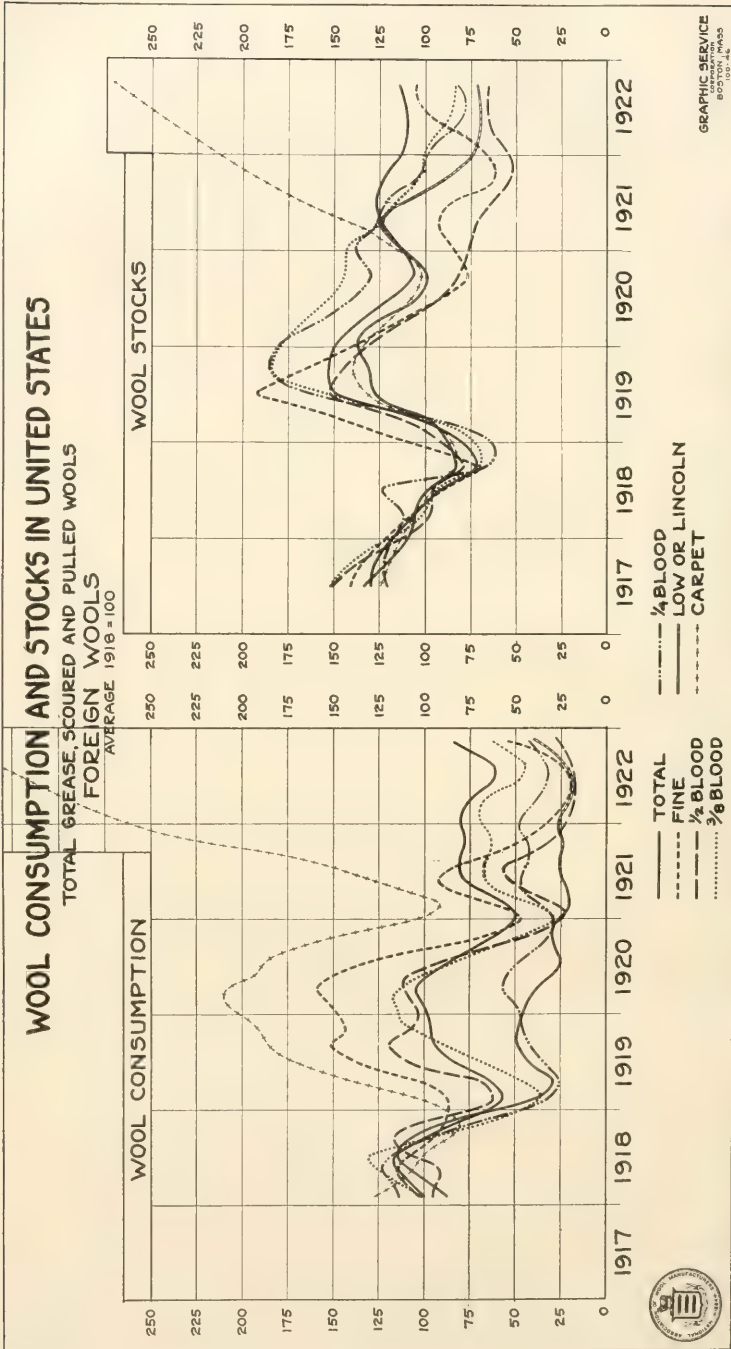
DOMESTIC WOOLS

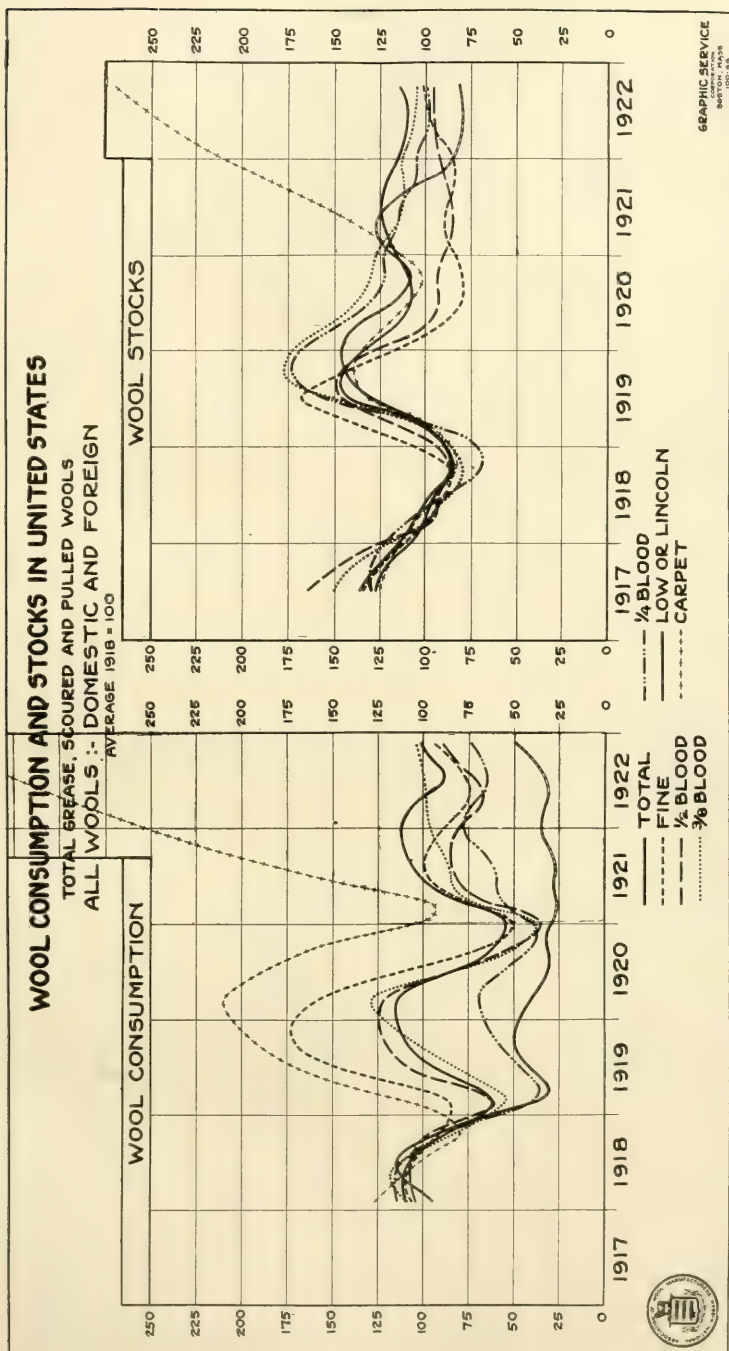
AVERAGE 1918 = 100



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BOSTON, MASS.
100-448





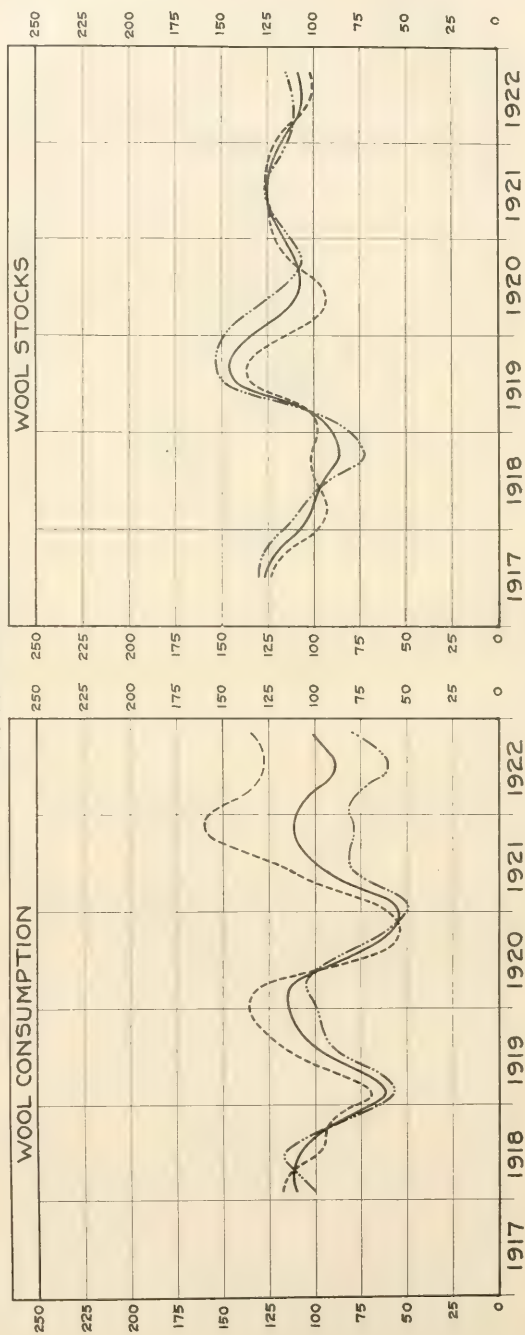


WOOL CONSUMPTION AND STOCKS IN THE UNITED STATES

TOTAL GREASE, SCOURED AND PULLED WOOLS

GRAND TOTALS

AVERAGE 1918 = 100



GRAPHIC SERVICE
BOSTON, MASS.
JUN 1922

PREDATORY WILD ANIMALS.

That the Biological Survey is doing good work in destroying predatory wild animals, is shown by the results secured from the constant campaign which is carried on to rid the cattle and sheep grazing states of the animal destroying beasts which infest them. According to the report of the Chief of the Bureau of Biological Survey, the destruction of 80,000 predatory animals during the fiscal year ended June 30, 1922 represented a saving of livestock and game valued at more than \$4,000,000.

During the year organized field operations were carried on in Arizona, Arkansas, California, Colorado, Idaho, Michigan, Montana, Nevada, New Mexico, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington, and Wyoming. An average force of 266 hunters, trappers, and poisoners was employed under Bureau supervision, some of whom were paid by the Government and some by the several states co-operating in the work. Trained hunters stationed along the passes leading across the Mexican borders to repel a constantly recurring invasion of wolves from Mexico into New Mexico and Arizona, have succeeded wonderfully in performing this difficult task, either killing or turning back nearly all animals attempting to make the incursion.

During the year hunters, as required by the regulations, turned in as evidence of their work the skins or scalps of 30,986 predatory animals, of which 687 were large gray wolves, 27,185 coyotes, 2,827 bobcats and Canadian lynxes, 173 mountain lions, and 114 bears. Skins sold during the fiscal year brought \$34,202.75, of which sum \$22,375 were secured for skins taken during the fiscal year, making a total from this source in excess of \$283,000 since the work was undertaken in 1915.

In addition to shooting and trapping these animals, poisoning operations covering many miles of territory were carried on, it being estimated that 50,000 coyotes were destroyed by the campaigns and wide stretches of territory cleared of these pests.

Likewise the campaigns to clear many of the states of rodent pests which destroy herbage and crops and weaken, by burrowing, the irrigation canal banks, were successfully waged, 10,164,899 acres of Federal land and 93,345,400 acres of state and private lands having been treated and largely cleared since 1916 in the sixteen states enumerated. In Arizona a district 120 miles long and from 10 to 20 miles wide, which was densely populated by prairie dogs and in which they consumed everything that grew, has been cleared of them and is now producing forage estimated to be sufficient for the support of at least 50,000 sheep, and farmers are now growing alfalfa and grain on land, which three years ago was denuded by the ravages of these rodents.

The following table shows the number of real predatory animals killed in each fiscal year in the campaign conducted by the Biological Survey since the co-operative work was begun. In the number reported, the animals destroyed by the poison campaigns are not included.

PREDATORY ANIMALS DESTROYED IN BIOLOGICAL SURVEY AND CO-OPERATIVE CAMPAIGNS FROM THE INITIATION OF THE WORK, JULY 1, 1915, TO JUNE 30, 1922 (NOT INCLUDING ANIMALS POISONED).

| States. | True Predatory Animals Killed. | | | | | | Year Co-operative Work was Begun.* |
|--------------------------------|--------------------------------|---------------------------|----------|-------------------------|---------|---------|--|
| | Bears. | Bobcats and Lynxes. | Coyotes. | Moun- tain Lions. | Wolves. | Total. | |
| Arizona..... | 55 | 878 | 6,202 | 314 | 234 | 7,683 | 1919 |
| Arkansas..... | 0 | 57 | 0 | 0 | 156 | 213 | 1922 |
| California..... | 11 | 1,165 | 5,650 | 29 | 1 | 6,856 | 1919 |
| Colorado..... | 31 | 520 | 7,717 | 50 | 152 | 8,470 | 1918 |
| Idaho..... | 49 | 1,638 | 17,731 | 10 | 119 | 19,547 | 1921 |
| Michigan..... | 7 | 30 | 148 | 0 | 61 | 246 | 1922 |
| Montana..... | 38 | 406 | 7,510 | 45 | 381 | 8,380 | 1918 |
| Nevada..... | 3 | 4,776 | 32,750 | 26 | 4 | 37,559 | 1916 |
| New Mexico..... | 116 | 1,378 | 7,241 | 209 | 469 | 9,413 | 1918 |
| ¹ North Dakota..... | 0 | 10 | 655 | 0 | 1 | 666 | 1920 |
| Oklahoma..... | 0 | 12 | 300 | 0 | 120 | 432 | 1922 |
| Oregon..... | 89 | 2,370 | 12,580 | 43 | 22 | 15,104 | 1920 |
| South Dakota..... | 1 | 85 | 1,412 | 0 | 33 | 1,531 | None |
| Texas..... | 0 | 1,498 | 16,152 | 14 | 1,806 | 19,470 | 1918 |
| Utah..... | 39 | 2,981 | 21,795 | 77 | 171 | 25,063 | 1918 |
| Washington..... | 41 | 394 | 11,733 | 9 | 0 | 12,177 | 1918 |
| Wyoming..... | 40 | 511 | 11,221 | 15 | 596 | 12,383 | 1918 |
| Totals..... | 520 | 18,709 | 160,797 | 841 | 4,326 | 185,193 | |

*The date refers to the fiscal year ended June 30 in each case.

¹Predatory Animal work was discontinued in North Dakota in 1922.

FOREST RESERVES.

The number of sheep grazed during the calendar year 1921, in the National Forests were as follows:

SHEEP AND GOATS.

GRAZED UNDER PERMIT, CALENDAR YEAR 1921.

| State. | Number of Stock Grazed. | |
|---------------------|-------------------------|--------|
| | Sheep. | Goats. |
| Alabama..... | | |
| Arizona..... | 316,447 | 4,030 |
| Arkansas..... | 12 | 167 |
| California..... | 557,125 | 10,691 |
| Colorado..... | 909,767 | 1,316 |
| Florida..... | 659 | 21 |
| Georgia..... | | |
| Idaho..... | 1,374,836 | |
| Montana..... | 670,751 | 110 |
| Nebraska..... | | |
| Nevada..... | 341,947 | |
| New Hampshire..... | | |
| New Mexico..... | 390,675 | 27,143 |
| North Carolina..... | 309 | |
| Oklahoma..... | | |
| Oregon..... | 727,176 | 96 |
| South Dakota..... | 4,200 | |
| Tennessee..... | 136 | |
| Utah..... | 766,337 | |
| Virginia..... | 196 | |
| Washington..... | 193,891 | |
| West Virginia..... | 18 | |
| Wyoming..... | 681,895 | |
| Total, 1922..... | 6,936,377 | 43,574 |
| Total, 1921..... | 7,412,412 | 43,190 |
| Increase..... | | 384 |
| Decrease..... | 476,035 | |

Owing to a change from the fiscal to the calendar year in reporting the number of stock grazed, it is difficult to make comparisons; but from records available it seems that approximately 165,000 fewer sheep and goats were grazed than in the calendar year 1920.

The open range live tock industry of the West, the Chief Forester says, is one of extreme hazard, and to secure permanence and stability of the business the ranges must have a sustained forage producing capacity and stockmen must entrench themselves with ranch property and equipment to carry them over periods of depression or drought.

The demand, he says, for range now fully equals and in many places overtakes the capacity of the forests, and to provide for increased demand,

to protect existing ranges, and utilize new areas, improvements (such as boundary fences to prevent trespass, division and draft fences to control more adequately the movement and distribution of stock, water development, and eradication of poisonous plants) estimated to cost \$3,500,000, will be necessary.

The importance of improved methods of range and livestock management, through which are obtained both more forage and more and higher grade animals, is apparent, the Chief Forester declares, when it is borne in mind that about 53 per cent of all the sheep and 22 per cent of all the cattle in the eleven far western states are grazed at least a part of the year in the National Forests which are depended upon by the livestock industry more and more for summer range. Agricultural settlement and a steady decline in the carrying capacity of the public domain are destroying, he says, the balance between summer and winter feed, and to meet the demands of the future the productivity of forest ranges must be raised. To secure this result an effort is being made to collect accurate information as to the character and carrying capacity of the ranges, the period during which forage can be used without injury to the range, the class of stock for which the range is best adapted, and how stock should be handled during different seasons. With this investigation completed it is hoped that plans can be carried out for deferred and rotating grazing, permitting a portion of each range to be re-seeded at regular intervals with the most nutritious grasses.

To help the stockmen who were in financial difficulties in 1921, the date for paying grazing fees, which is 30 days before the opening of the grazing season, was postponed by Act of Congress until December 1, 1921, at which time those who were delinquent were permitted to submit propositions of settlement and a note payable on or before July 1, 1922 with interest at 6 per cent. In 1922 conditions confronting the industry did not seem to warrant the collection of fees at the usual time, so that regulations were waived to allow payment in two installments, one half before entering the forest and the other half on or before December 1, 1922.

At the close of the fiscal year the net area of the National Forests was 156,837,382 acres, the net area increasing during the year 171,237 acres.

The following table shows the gross areas in the National Forests, the acres in each forest which have been alienated, the net area in each forest, and the total of each of the three columns:

ACREAGE IN FOREST RESERVES BY STATES.

| States. | Areas Within National Forest Boundaries. | | |
|---------------------|--|-------------------------|--------------------------|
| | Gross Area. | Alienated Area. | Net Area. |
| | <i>Acres.</i> | <i>Acres.</i> | <i>Acres.</i> |
| Alabama..... | 198,385 | 117,083 ¹ | 81,302 ² |
| Alaska..... | 20,708,187 | 134,743 | 20,573,444 |
| Arizona..... | 12,220,739 | 953,099 | 11,267,640 |
| Arkansas..... | 1,470,393 | 526,302 ³ | 944,091 ⁴ |
| California..... | 24,291,951 | 5,110,443 | 19,181,508 |
| Colorado..... | 14,748,142 | 1,456,863 | 13,291,280 |
| Florida..... | 719,979 | 399,706 | 320,273 |
| Georgia..... | 680,550 | 535,882 ⁵ | 144,668 |
| Idaho..... | 20,184,092 | 1,431,467 | 18,752,625 |
| Maine..... | 115,558 | 83,394 ⁶ | 32,164 |
| Michigan..... | 167,057 | 43,410 | 123,647 |
| Minnesota..... | 1,581,014 | 533,073 | 1,047,941 |
| Montana..... | 18,929,897 | 2,996,008 | 15,933,889 |
| Nebraska..... | 217,808 | 11,864 | 205,944 |
| Nevada..... | 5,244,364 | 268,227 | 4,976,137 |
| New Hampshire..... | 870,554 | 446,347 ⁷ | 404,207 |
| New Mexico..... | 9,486,211 | 1,062,873 | 8,423,338 |
| North Carolina..... | 1,730,453 | 1,395,973 ⁸ | 334,480 |
| Oklahoma..... | 61,640 | 160 | 61,480 |
| Oregon..... | 15,426,362 | 2,293,703 | 13,132,659 |
| Porto Rico..... | 65,950 | 53,507 | 12,443 |
| South Carolina..... | 137,216 | 118,762 ⁹ | 18,454 |
| South Dakota..... | 1,275,702 | 216,957 | 1,058,745 |
| Tennessee..... | 881,713 | 636,512 ¹⁰ | 245,251 |
| Utah..... | 7,989,706 | 538,158 | 7,451,548 |
| Virginia..... | 1,292,375 | 926,437 ¹¹ | 365,938 |
| Washington..... | 11,622,433 | 1,688,158 | 9,934,275 |
| West Virginia..... | 845,516 | 742,057 | 103,459 |
| Wyoming..... | 8,635,999 | 221,547 | 8,414,452 |
| Total..... | 181,799,997 | 24,962,715 ¹ | 156,837,282 ¹ |

1. Includes 17,495 acres approved for purchase under Weeks law.
2. Includes 63,262 acres acquired under the Weeks law.
3. Includes 20,655 acres approved for purchase under the Weeks law.
4. Includes 40,061 acres acquired under the Weeks law.
5. Includes 14,509 acres approved for purchase under the Weeks law.
6. Includes 87 acres approved for purchase under the Weeks law.
7. Includes 4,037 acres approved for purchase under the Weeks law.
8. Includes 13,687 acres approved for purchase under the Weeks law and 8,067 acres transferred from the Treasury Department.
9. Includes 725 acres approved for purchase under the Weeks law.
10. Includes 13,423 acres approved for purchase under the Weeks law.
11. Includes 126,012 acres approved for purchase under the Weeks law.

The fees for the grazing use of the National Forests for 1922 will total, according to the best estimates possible, \$2,166,347 as against \$2,415,618 for 1921. The cash receipts for grazing fees during the fiscal year amounted to \$2,933,930.87, of which sum \$1,948,925.09 represented deferred payments for forage used during the preceding fiscal year. On July 1, 1922 there remained unpaid \$77,997.40 fees due for the season of 1921 and approximately \$100,000 due on the first installment for the season of 1922. Disregarding dates of payment and assuming that all outstanding obligations will be met by forest users, the income producing business of the National Forests amounted to \$4,271,903 as compared with \$4,468,940 during the fiscal year 1921.

In view of the importance today of the Forest Reserves to the sheep and cattlemen and the people generally who consume meat, it is interesting to recall the violent opposition raised by some to the organization of the Reserves by the Federal Government and regulations promulgated by the Chief Forester to govern their administration. In our Review issued in 1908, after referring to mistakes which had been made, we said

When the necessary adjustments have been made we believe the sheepmen will quite generally agree that the establishment of the Reserves was a good thing for the sheep industry of the country. Considerable time will be needed to devise and put in force satisfactory regulations for the government of the Reserves, but with co-operation and honest criticism fairly satisfactory results will eventually be secured, and when that time comes critics of the present day will become, we believe, the steadfast supporters of the Reserves, which even now some see will prove of inestimable benefit to the sheep industry of the West.

What we predicted would happen in the intervening years has happened, and it is now clearly seen that without the Reserves today, the sheep industry in the great wool growing states could not exist in anything like its present proportions.

AUCTIONS BY THE UNITED STATES GOVERNMENT.

During the early months of the year 1922, the Government sold at three auctions, at advancing prices, what remained of Government owned wool stocks, the last sale taking place on March 2nd. The following tables prepared by Messrs. Brown and Howe, the well known wool merchants, to whom we are indebted for them, show the dates of the sales, the amounts offered, and the amounts and grades of carding, combing, and miscellaneous unclassified grades, together with the wastes and yarn sold. The figures are as follows:

| | Date | Amount Offered. |
|-----------------|----------------------------|--------------------|
| Auction sale | January 5, 1922 | 8,000,000 pounds. |
| " " | February 2, 1922 | 7,000,000 " |
| " " | March 2, 1922 | 4,000,000 " |
| Total | | 19,000,000 pounds. |

COMBING WOOLS.

| | Fine | 58/60's. | 50/56's and 56's. | 46/50's and 50's. | 46's. | 44/46's. | 40/44's and 44's. | 40's and Below. |
|----------------------------|------|----------|----------------------|----------------------|---------|----------|----------------------|--------------------|
| South American Fleece..... | | | 610,156 | 2,227,830 | 470,111 | | 2,027,620 | 12,065 |
| Foreign Pulled..... | | | | | | | | |
| Domestic Pulled..... | | | | | | | | |
| Territory Fleece..... | | | | | | | | |
| Totals, Combing Wool..... | | | 610,156 | 2,227,830 | 470,111 | | 2,027,620 | 12,065 |

Grand total all grades of Combing wool, 5,347,782 pounds.

CARDING WOOLS.

| Description. | Fine. | 58/60's. | 50/56's and 56's. | 46/50's and 50's. | 46's. | 44/46's. | 40/44's and 44's. | 40's and Below. |
|------------------------------------|---------|----------|----------------------|----------------------|---------|----------|----------------------|--------------------|
| Cape Fleece..... | | | | | | | | |
| South American Fleece..... | | | 4,978,900 | 2,666,633 | | | 6,625 | |
| Original Territory Fleece..... | | | | | | | | |
| Territory Graded Fleece..... | | 16,943 | | | | | | |
| Domestic Fleece..... | 1,696 | | 29,482 | | | | | |
| Texas and California Fleece..... | 305,657 | 41,883 | 22,661 | | | | | |
| Foreign Pulled..... | | | | | | | 4,334 | |
| Domestic Pulled..... | | | | | | | | |
| Scoured, Foreign and Domestic..... | | | 72,199 | 32,474 | 669,705 | 221,896 | 1,918,576 | |
| Totals, Carding Wool..... | 307,353 | 58,826 | 5,103,242 | 2,699,107 | 669,705 | 221,896 | 1,929,535 | |

Grand total all grades of Carding wool, 10,989,664 pounds.

MISCELLANEOUS.

| | |
|---|------------------|
| Australian and New Zealand Crossbreds of various grades | 3,182,738 pounds |
| Unclassified various grades | 49,412 " |
| Wastes..... | 15,291 " |
| Yarn..... | 13,093 " |

Total.....3,260,534 pounds.

Summary.

| | |
|--------------------|--------------------|
| Combing Wool..... | 5,347,782 pounds. |
| Carding Wool..... | 10,989,664 " |
| Miscellaneous..... | 3,260,534 " |
| Total..... | 19,597,980 pounds. |

BOSTON WOOL STOCKS AS OF DECEMBER 30, 1922 AND
DECEMBER 31, 1921 AND 1920.

We give below the stocks of wool unsold in the Boston market on December 30, 1922 as reported to, and compiled by, the Cooley & Marvin Company, accountants. We are permitted to print these tables through the courtesy of Mr. F. Nathaniel Perkins, Secretary of the Boston Wool Trade Association. They are as follows:

DOMESTIC.

| | Dec. 30, '22. | Dec. 31, '21. | Dec. 31, '20. |
|--|---------------|---------------|---------------|
| Territory, California, Texas. . . . | 10,405,540 | 16,983,200 | 69,571,402 |
| Fleeces (grown east of the Mississippi River and in Minnesota, Iowa, and Missouri) | 3,573,625 | 3,736,694 | 2,641,950 |
| Scoured | 3,651,747 | 4,901,051 | 9,437,708 |
| Tops | 1,084,374 | 1,465,407 | 2,171,051 |
| Noils | 1,723,591 | 669,744 | 1,659,728 |
| Pulled (in grease) | 1,646,292 | 1,350,909 | 1,505,807 |
| <hr/> | | | |
| Total domestic | 22,085,169 | 29,107,005 | 86,987,646 |

FOREIGN.

| | | | |
|-----------------------------------|------------|------------|-------------|
| Class I and Class II | 5,082,258 | 13,154,453 | 30,262,810 |
| Class III | 4,026,855 | 3,505,361 | 3,060,842 |
| Pulled (in grease) | 635,781 | 3,246,005 | 2,117,254 |
| Scoured | 6,241,549 | 4,608,516 | 12,883,408 |
| Tops | 1,217,667 | 1,457,101 | 3,580,282 |
| Noils | 548,504 | 360,516 | 710,207 |
| <hr/> | | | |
| Total foreign out of bond | 17,752,614 | 26,331,952 | 52,614,803 |
| Foreign in bond | 46,477,797 | 8,103,380 | ..... |
| <hr/> | | | |
| Grand total | 86,315,580 | 63,542,337 | 139,602,449 |

NUMBER OF SHEEP AS OF JANUARY 1 FOR YEARS 1911 TO 1923,
INCLUSIVE, ESTIMATED BY THE UNITED STATES DEPARTMENT OF AGRICULTURE.

The following table shows the number of sheep in the United States as of January 1, in each year since 1916, as estimated by the United States Department of Agriculture. In 1910 the Census reported 52,448,000 sheep as of April 15, 1910.

This estimate, if accurate, confirms the deduction to be made from the table showing the slaughter of sheep during the past year, to wit, that the slump in numbers caused by the deflation period following the war has been halted and that an increase in sheep numbers may be expected in succeeding years, unless unexpected untoward conditions should arise. The depression came swiftly, but the recovery must, because of the havoc wrought in the stock of ewes, necessarily be slow. With an increase of 1,161,000 sheep, in the year, using the preliminary figures in each case and an increase of \$2.70 in value per head, it is quite evident that the owners of sheep have property of considerable value left after the pinch of the past few years.

| Year. | Number. ^m | Value. | |
|-------------------|-------------------------|--------------------|--------------------------|
| | | Per Head. | Aggregate. |
| 1923..... | 37,209,000 | \$7.50 | \$278,939,000 |
| 1922..... | ^a 36,327,000 | 4.80 | 173,159,000 |
| 1921..... | ^a 37,452,000 | ^a 6.30 | ^a 235,855,000 |
| 1920..... | ^a 39,025,000 | ^a 10.47 | ^a 408,586,000 |
| 1919..... | 48,866,000 | 11.63 | 568,265,000 |
| 1918..... | 48,603,000 | 11.82 | 574,575,000 |
| 1917..... | 47,616,000 | 7.13 | 339,529,000 |
| 1916..... | 48,625,000 | 5.17 | 251,594,000 |
| 1911-1915 Av..... | 51,430,000 | 3.96 | 203,643,000 |
| 1910..... | *52,448,000 | 4.12 | 216,030,000 |

*Census report of numbers April 15, 1910.

^aRevised figures.

WESTWARD TREND OF SHEEP PRODUCTION.

WE give on the following pages maps printed by the courtesy of Armour and Company, which show how steadily, though slowly, the center of sheep production has been tending westward.

The first census of sheep was taken in 1840 at which time the center of sheep production was thirty miles north of Altoona, Pennsylvania, and New York was the leading sheep state, having more than one-fourth of the country's total number of sheep. Ohio was second; Pennsylvania, third; and Vermont was fourth.

Ten years later, there was a marked increase in the total number of sheep in New York with a corresponding increase in Ohio, which assumed the lead as a sheep producing state and held it until 1900. The center of production moved across the Pennsylvania line to the vicinity of Beverly, Ohio, about thirty-five miles north of Parkersburg, West Virginia.

By 1860 the center had moved across the State of Ohio to the Indiana line, near Harrison, about twenty miles north of Covington, Kentucky. New York was still second in sheep population.

By 1870 the center was slightly south of Westfield, Illinois, about fifty miles southwest of Terre Haute, Indiana. Ohio retained her lead in numbers, being followed by California, New York, Michigan, Indiana, and Illinois in the order named.

After the census of 1880 the center was found to be near Edina, Missouri, approximately fifty miles southwest of Keokuk, Iowa. In this census California reached her zenith as a sheep state, having 4,152,349, while Ohio which retained the lead had 4,902,486. For the first time, Texas became an important factor in sheep production, ranking third with 2,411,633. Michigan was again fourth, while New Mexico went into the fifth position.

In 1890, although Iowa ranked nineteenth among the sheep producing states, the center was fixed in that state about seventy miles north and slightly west of St. Joseph, Missouri, the drift being still westward. Texas passed California and stood next to Ohio, with Michigan still fourth and Montana which displaced New Mexico, in fifth position.

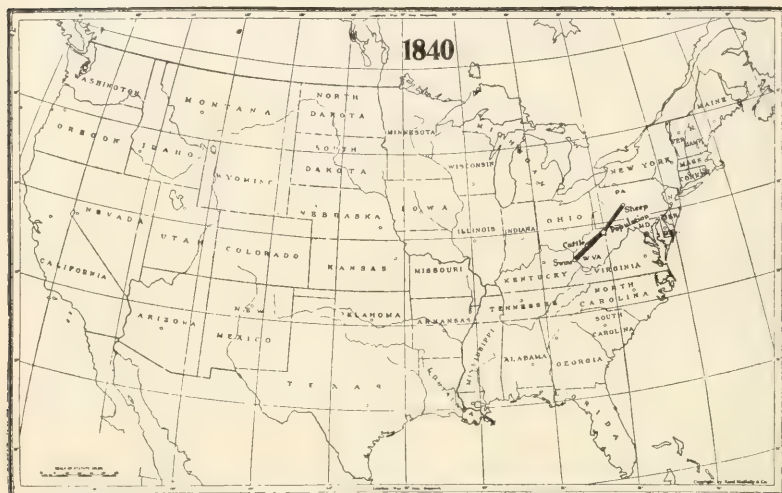
In the ten years between 1890 and 1900, many changes took place, the census of that year showing that Ohio, which had been the leading state since 1850, was displaced by Montana, whose sheep population had been increasing so rapidly that it jumped from fifth place in 1890 to first place in 1900, with 6,170,483 sheep. Wyoming with 5,009,613, was second and New Mexico was third with 4,899,487. The center was located near Pleasanton, Nebraska, about twenty miles north of Kearney.

The banner year for sheep in the United States was 1900 (the total reaching 61,503,713), since which time the number has decreased. In 1910 it was about 9,000,000 less, but the decrease was relatively proportionate all over the country, the center being a few miles east of Sumner, Nebraska, about 20 miles west of its 1900 location.

By the census of 1920, approximately two-thirds as many sheep were listed as in 1910, and the decrease was much greater east of the Mississippi

River than west of it. Texas became the leading sheep state, although her total was only 2,552,412 head. California ranked second; Idaho, third; Ohio, fourth; Montana, fifth; and Oregon, sixth. Eastern decreases were very marked, New York showing only a few over a half million and approximately one-ninth of the number in 1840. The center of production moved to the southwest corner of Nebraska near Imperial.

The decadence of certain states as sheep producers is very marked. In 1920 Vermont possessed only one twenty-sixth of her sheep population of 1840; New Hampshire, one twenty-second, and Connecticut, one-fortieth. Ohio showed about three-sevenths of the sheep she had at her high point in 1870, a decrease of 2,800,000; Michigan had less than half of her largest number in 1900; Wisconsin possessed only a little over one fourth of the 1,675,000 she had in 1900, while the Atlantic Coast and Gulf states and the Bluegrass district were all greatly reduced. Range drouths have been calamitous in Montana, Idaho, Wyoming, New Mexico, Arizona, Utah, and Nevada, the total reduction between 1910 and 1920 being approximately 10,000,000 head. Curiously enough some states have been very constant in their sheep population in the last three censuses, as for example, Iowa and California, while Kansas actually registered an increase.



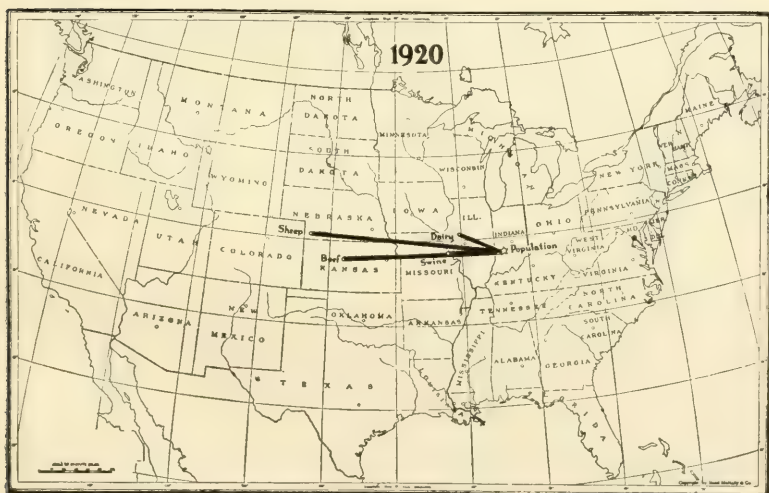
CENTER OF POPULATION AND STOCK RAISING, 1840.



CENTER OF POPULATION AND STOCK RAISING, 1860.



CENTER OF POPULATION AND STOCK RAISING, 1890.



CENTER OF POPULATION AND STOCK RAISING, 1890 AND 1920.

SURPLUS SHEEP PRODUCING STATES 1840-1920.

Through the courtesy of Armour's Bureau of Agricultural Research and Economics, we are able to print the accompanying cuts showing the changes in the surplus sheep producing states which have occurred as shown by the country's first and its last census, 1840 and 1920.

In 1840 Vermont, where the breeding of Merino sheep was undertaken by many flockmasters at an early date, was the only state in the country which had more than five sheep per capita, although all the North Atlantic states, Ohio, Kentucky, and Virginia had a real surplus.

At the beginning of the Civil War, Vermont and New Hampshire still showed a slight surplus, but the other Eastern states had lost their position as surplus producers. Ohio and Michigan had from 1.5 to 1.7 sheep per capita. Kentucky was receding rapidly, but the capacity of the Pacific Coast states was shown by the surplus developing on the Coast and in Texas, Utah, and New Mexico, the latter succeeding to Vermont's premier position of 1840.

The census of 1880 showed the western drift of development, the entire range country except Texas indicating a surplus production. Montana, Wyoming, Idaho, Oregon, Nevada, Utah, Arizona, and New Mexico possessed over five sheep per capita, Wyoming, having fifty-five and Montana and New Mexico twenty-five sheep per capita.

In 1900 Oregon, Nevada, Idaho, Montana, Wyoming, Utah, Arizona, and New Mexico still had more than five sheep per capita, but population was gaining upon sheep production in the other range states.

Twenty years later the West alone retained its high rate of production in relation to population, considerable change taking place even there. Nevada was in the lead with eleven sheep per capita. Wyoming had 9.4, and Idaho, 5.5, while New Mexico, the leader in 1860, had only 4.5, and Montana which had twenty-five sheep per capita in 1880, had only 3.8 forty years later.

The number of sheep per capita in the decades from 1830-39 to 1910-19, inclusive, is shown by the following table:

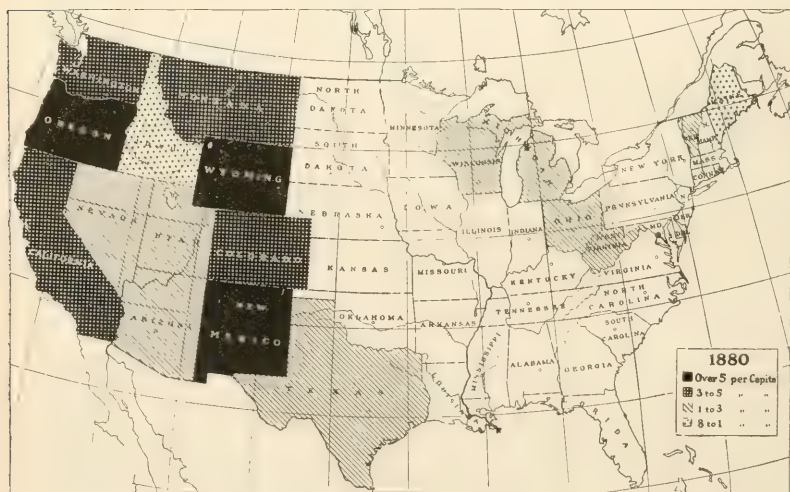
| Decade. | Number Sheep per Capita. | Decade. | Number Sheep per Capita. |
|--------------|-----------------------------|--------------|-----------------------------|
| 1830-39..... | 1.13 head | 1880-89..... | .57 head |
| 1840-49..... | .94 | 1890-99..... | .54 |
| 1850-59..... | .71 | 1900-09..... | .48 |
| 1860-69..... | .74 | 1910-19..... | .33 |
| 1870-79..... | .70 | | |

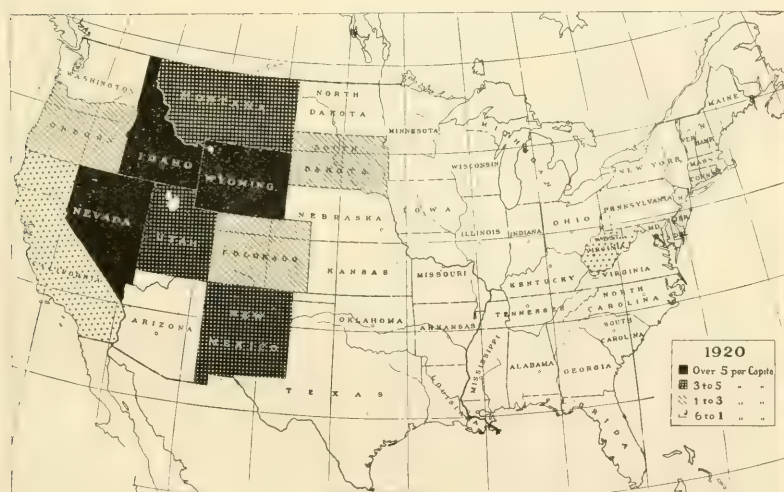
The per capita yearly consumption of lamb from 1900 to 1921, inclusive, is shown by the following table:

| Year. | Per Capita Pounds. | Year | Per Capita Pounds. |
|-----------|-----------------------|-----------|-----------------------|
| 1900..... | 7.7 | 1914..... | 7.5 |
| 1907..... | 6.4 | 1915..... | 6.4 |
| 1908..... | 6.2 | 1916..... | 6.2 |
| 1909..... | 6.6 | 1917..... | 4.7 |
| 1910..... | 6.5 | 1918..... | 4.7 |
| 1911..... | 7.8 | 1919..... | 5.8 |
| 1912..... | 8.2 | 1920..... | 5.0 |
| 1913..... | 7.5 | 1921..... | 6.3 |

The number of sheep in the country has fluctuated in harmony with the varying political and economic conditions of the years. With a high protective tariff on wool now in effect, it is incumbent upon the wool growers of the country to prove accurate the assertions made to Congressional committees, that if given adequate protection, the flocks would be sufficiently increased in number and size to produce enough wool to supply the country's needs.







THE WOOL PRODUCT OF 1922.

From the Table of Production it appears that the total product of sheared wool in the United States for the year 1922 was 219,095,000 pounds and of pulled wool 42,000,000 pounds, making an aggregate wool production of 261,095,000 pounds. The average shrinkage of sheared wool in 1922 was 59 per cent, making the scoured equivalent of the sheared wool 89,829,000 pounds. The average shrinkage of pulled wool from the brushed to the scoured condition was 30 per cent, making the scoured equivalent of the pulled wool 29,400,000 pounds, the aggregate wool product, sheared and pulled, being 261,095,000 pounds, equivalent to 119,229,000 scoured pounds. In 1921 the sheared wool product was 224,564,000 pounds, the pulled wool 48,500,000 pounds, and the total, sheared and pulled, was 273,064,000, equivalent to 126,021,000 pounds scoured. The aggregate wool product in 1922 was 11,969,000 pounds less than that of 1921. On the scoured basis the product of 1922 was 3,600,000 pounds smaller than that of 1921.

WOOL PRODUCT OF THE UNITED STATES FOR 1922.

| State. | Quality. | Estimate of U. S. Department of Agriculture, 1922. | | | Per Cent of Shrinkage. | Equivalent Quantity of Scoured Wool. |
|---------------------|----------------------|--|----------------------------|---------------------|------------------------|--------------------------------------|
| | | Number of Fleeces. | Average Weight per Fleece. | Wool Product. | | |
| | | 000 omitted | Pounds | 000 omitted. Pounds | | 000 omitted. Pounds |
| Maine..... | 10% fine, 90% medium | 95 | 6.2 | 589 | 42 | 342 |
| New Hampshire..... | 5% " 95% " | 20 | 6.4 | 128 | 43 | 73 |
| Vermont..... | 20% " 80% " | 48 | 6.5 | 312 | 48 | 162 |
| Massachusetts..... | Medium..... | 17 | 6.0 | 102 | 42 | 59 |
| Rhode Island..... | "..... | 3 | 6.3 | 19 | 41 | 11 |
| Connecticut..... | "..... | 9 | 6.0 | 54 | 41 | 32 |
| New York..... | 30% fine, 70% medium | 424 | 6.8 | 2,882 | 48 | 1,499 |
| New Jersey..... | Medium..... | 9 | 5.8 | 55 | 41 | 32 |
| Pennsylvania..... | 60% fine, 40% medium | 513 | 6.7 | 3,437 | 51 | 1,684 |
| Delaware..... | Medium..... | 2 | 5.8 | 12 | 41 | 7 |
| Maryland..... | "..... | 70 | 6.4 | 449 | 41 | 265 |
| West Virginia..... | 75% fine, 25% medium | 479 | 4.9 | 2,346 | 50 | 117 |
| Kentucky..... | Medium..... | 536 | 5.0 | 2,678 | 39 | 1,634 |
| Ohio..... | 60% fine, 40% medium | 1,837 | 7.4 | 13,596 | 53 | 6,390 |
| Michigan..... | 25% " 75% " | 1,078 | 7.3 | 7,868 | 50 | 3,934 |
| Indiana..... | Medium..... | 504 | 7.0 | 3,527 | 45 | 1,940 |
| Illinois..... | 10% fine, 90% medium | 457 | 7.5 | 3,426 | 49 | 1,747 |
| Wisconsin..... | 5% " 95% " | 335 | 7.3 | 2,446 | 46 | 1,321 |
| Minnesota..... | 5% " 95% " | 341 | 7.2 | 2,457 | 50 | 1,229 |
| Iowa..... | 10% " 90% " | 659 | 7.9 | 5,208 | 50 | 2,604 |
| Missouri..... | 5% " 95% " | 772 | 6.6 | 5,098 | 45 | 2,804 |
| Virginia..... | Medium..... | 272 | 5.9 | 1,607 | 38 | 996 |
| North Carolina..... | "..... | 88 | 4.5 | 395 | 42 | 229 |
| South Carolina..... | "..... | 26 | 4.0 | 102 | 42 | 59 |
| Georgia..... | "..... | 54 | 2.9 | 157 | 42 | 91 |
| Florida..... | "..... | 49 | 3.2 | 157 | 42 | 91 |
| Alabama..... | "..... | 53 | 3.5 | 185 | 41 | 109 |
| Mississippi..... | "..... | 149 | 3.0 | 446 | 41 | 263 |
| Louisiana..... | "..... | 142 | 3.7 | 525 | 44 | 294 |
| Arkansas..... | "..... | 76 | 4.5 | 344 | 44 | 193 |
| Tennessee..... | "..... | 288 | 4.5 | 1,294 | 41 | 763 |
| Kansas..... | 20% fine, 80% medium | 225 | 7.5 | 1,690 | 55 | 761 |
| Nebraska..... | 20% " 80% " | 174 | 8.0 | 1,395 | 55 | 628 |
| South Dakota..... | 20% " 80% " | 536 | 7.5 | 4,021 | 55 | 1,809 |
| North Dakota..... | 20% " 80% " | 217 | 7.9 | 1,715 | 58 | 720 |
| Montana..... | 20% " 80% " | 1,927 | 8.0 | 15,416 | 61 | 6,012 |
| Wyoming..... | 20% " 80% " | 2,812 | 8.0 | 22,500 | 65 | 7,875 |
| Idaho..... | 20% " 80% " | 1,923 | 7.8 | 15,000 | 60 | 6,000 |
| Washington..... | 10% " 90% " | 534 | 7.7 | 4,112 | 67 | 1,357 |
| Oregon..... | 50% " 50% " | 1,732 | 7.5 | 12,992 | 65 | 4,547 |
| California..... | 33% fall, 67% spring | 1,950 | 6.9 | 13,455 | 64 | 4,844 |
| Nevada..... | 75% fine, 25% medium | 1,012 | 6.5 | 6,580 | 66 | 2,237 |
| Utah..... | 75% " 25% " | 2,160 | 7.4 | 15,984 | 63 | 5,914 |
| Colorado..... | 50% " 50% " | 1,073 | 6.5 | 6,976 | 63 | 2,581 |
| Arizona..... | 80% " 20% " | 923 | 6.5 | 6,000 | 65 | 2,100 |
| New Mexico..... | 50% " 50% " | 1,600 | 6.0 | 9,600 | 65 | 3,360 |
| Texas..... | 25% fall, 75% spring | 2,681 | 7.2 | 19,300 | 65 | 6,755 |
| Oklahoma..... | 50% fine, 50% medium | 63 | 7.3 | 458 | 58 | 192 |
| Pulled Wool..... | | 30,947 | 7.1 | 219,095 | 59 | 89,829 |
| Total Product..... | | | | 42,000 | 30 | 29,400 |
| | | | | 261,095 | | 119,229 |

The following shows the wool product figures for the four years 1919, 1920, 1921, and 1922.

| | 1922. | 1921. | 1920. | 1919. |
|--------------------|-------------|-------------|-------------|-------------|
| Sheared wool..... | 219,095,000 | 224,564,000 | 259,307,000 | 265,939,000 |
| Pulled wool..... | 42,000,000 | 48,500,000 | 42,900,000 | 48,300,000 |
| Total wool..... | 261,095,000 | 273,064,000 | 302,207,000 | 314,239,000 |
| Scoured equivalent | 119,229,000 | 126,021,000 | 137,315,365 | 138,937,484 |

The following table shows the clip in the grease of the eight heaviest producing states and the scoured product for the years 1919, 1920, 1921, and 1922, the states being arranged according to their production of wool in the grease in 1919.

Marked losses are registered in all the states between 1919 and 1922, except California, Texas, and Utah. Wyoming, though still retaining the lead, produced 12,207,000 pounds less in 1922 than in 1919. Within the same time Montana's production fell away 6,759,000 pounds; Idaho's, 6,255,000 pounds, Ohio's, 1,669,000 pounds, and New Mexico's, 5,476,000 pounds. It is a curious feature that the deflation had effects so uneven as these figures (which, of course, are estimates) indicate. On the other hand, the estimated production of Utah increased 184,000 pounds, that of California, 283,000 pounds, and Texas, 5,012,000 pounds.

The country's estimated production of wool in the grease and pulled in 1919 was 314,239,000 pounds, and in 1922 it was 261,095,000 pounds, or a loss of 53,144,000 pounds. Of this large amount 32,366,000 pounds are accounted for by the decreased production of the five following states: Wyoming, Montana, Idaho, Ohio, and New Mexico, leaving 20,778,000 pounds to be distributed among all the other wool producing states.

PRODUCTION* OF EIGHT LARGEST WOOL-GROWING STATES
FROM 1919 TO 1922, INCLUSIVE.

| States. | 1922. | | 1921. | | 1920. | | 1919. | |
|-----------------|---------|----------|---------|----------|---------|----------|---------|----------|
| | Grease. | Scoured. | Grease. | Scoured. | Grease. | Scoured. | Grease. | Scoured. |
| | Pounds. | Pounds. | Pounds. | Pounds. | Pounds. | Pounds. | Pounds. | Pounds. |
| Wyoming..... | 22,500 | 7,875 | 21,500 | 7,525 | 28,422 | 9,947 | 34,707 | 11,453 |
| Montana..... | 15,416 | 6,012 | 16,400 | 6,396 | 15,800 | 6,162 | 22,175 | 7,983 |
| Idaho..... | 15,000 | 6,000 | 16,800 | 6,720 | 21,702 | 8,680 | 21,255 | 7,864 |
| Utah..... | 15,984 | 5,914 | 16,500 | 6,105 | 16,150 | 5,975 | 15,800 | 5,530 |
| Ohio..... | 13,596 | 7,206 | 13,200 | 6,996 | 14,500 | 7,685 | 15,265 | 8,191 |
| New Mexico..... | 9,600 | 3,360 | 10,100 | 3,535 | 15,528 | 5,434 | 15,076 | 4,824 |
| Texas..... | 19,300 | 6,755 | 18,000 | 6,300 | 17,600 | 6,160 | 14,288 | 4,715 |
| California..... | 13,455 | 4,844 | 14,070 | 5,065 | 13,165 | 4,739 | 13,172 | 4,741 |
| Total..... | 124,851 | 47,966 | 126,570 | 48,642 | 142,867 | 54,782 | 151,738 | 55,301 |

*Three ciphers omitted.

PULLED WOOL.

The United States Department of Agriculture estimates the production of pulled wool for the year 1922 at 42,000,000 pounds, which is a decrease of 6,500,000 pounds from the estimate for 1921. This quantity may be divided into qualities as follows:

| | Pounds. |
|---------------------------|------------|
| Fine and fine medium..... | 12,000,000 |
| Medium and coarse..... | 30,000,000 |

This decrease of pulled wool seems to indicate that the financial necessities of wool growers are not so pressing as a year ago, and that the decimation of the flocks has been halted.

WEIGHT AND SHRINKAGE.

For a series of years the estimated average weight and shrinkage for the whole country has been as follows:

| | Average Weight. | Average Shrinkage. |
|-----------|-----------------|--------------------|
| | <i>Pounds.</i> | <i>Per Cent.</i> |
| 1910..... | 6.70 | 60.0 |
| 1911..... | 6.98 | 60.4 |
| 1912..... | 6.82 | 59.3 |
| 1913..... | 6.95 | 60.0 |
| 1914..... | 6.76 | 59.2 |
| 1915..... | 6.80 | 58.5 |
| 1916..... | 6.86 | 59.1 |
| 1917..... | 6.95 | 59.2 |
| 1918..... | 7.11 | 60.8 |
| 1919..... | 7.39 | 60.4 |
| 1920..... | 7.22 | 58.7 |
| 1921..... | 7.10 | 59.0 |
| 1922..... | 7.10 | 59.0 |

The next table presents a statement of the production of wool for a series of thirteen years with the annual increase or decrease, and the one following it gives the production for the same period reduced to the scoured equivalent, as shown in our yearly estimates.

FLEECE AND PULLED WOOL, WASHED AND IN THE GREASE.

| | Product. | Decrease. | Increase. |
|-----------------|-------------|------------|------------|
| 1910.....pounds | 321,362,750 | 6,747,999 | ..... |
| 1911....." | 318,547,900 | 2,814,800 | ..... |
| 1912....." | 304,043,400 | 14,504,500 | ..... |
| 1913....." | 296,175,300 | 7,868,100 | ..... |
| 1914....." | 290,192,000 | 5,983,300 | ..... |
| 1915....." | 288,777,000 | 1,415,000 | ..... |
| 1916....." | 288,490,000 | 287,000 | ..... |
| 1917....." | 285,573,000 | 2,917,000 | ..... |
| 1918....." | 299,921,000 | ..... | 14,348,000 |
| 1919....." | 314,239,000 | ..... | 14,318,000 |
| 1920....." | 302,207,000 | 12,032,000 | ..... |
| 1921....." | 273,064,000 | 29,143,000 | ..... |
| 1922....." | 261,095,000 | 11,969,000 | ..... |

Beginning with the year 1914, the estimates are those of the United States Department of Agriculture. The wool product for the year 1922 shows a decrease of 11,969,000 pounds from that of 1921, which was 29,143,000 pounds smaller than that of 1920. The Department has decreased the pulled wool figures by 6,500,000 pounds, and it makes the fleece wool product for 1922, 219,095,000 pounds, and the pulled wool 42,000,000 pounds.

SCOURED WOOL, FLEECE, AND PULLED.

| | Product. | Decrease. | Increase. |
|-----------------|-------------|------------|-----------|
| 1910.....pounds | 141,805,813 | 417,972 | ..... |
| 1911....." | 139,896,195 | 1,809,618 | ..... |
| 1912....." | 136,866,652 | 3,029,543 | ..... |
| 1913....." | 132,022,080 | 4,844,572 | ..... |
| 1914....." | 131,840,680 | ..... | 613,600 |
| 1915....." | 131,987,960 | ..... | 147,280 |
| 1916....." | 130,755,750 | 1,232,210 | ..... |
| 1917....." | 129,431,055 | ..... | 1,324,695 |
| 1918....." | 130,611,290 | ..... | 1,180,235 |
| 1919....." | 138,937,484 | ..... | 8,326,194 |
| 1920....." | 137,315,165 | 1,622,319 | ..... |
| 1921....." | 126,021,000 | 11,294,165 | ..... |
| 1922....." | 119,228,950 | 6,782,050 | ..... |

ANNUAL WOOL SUPPLY.

THE quantity of wool retained for consumption in the United States from the fiscal year 1909-10 to date is shown in the big table which follows. To this table which has been carried for many years, additions have been made this year to show the estimated production of mohair in this country, the domestic exports, and the percentage the foreign wool is of the total amount retained for consumption.

As the wool clip of a calendar year reaches the market during the governmental fiscal year, the clip of the calendar year is added to the imports of the fiscal year and thus the supply of new wool available for the year is clearly indicated. To illustrate, the clip of the year beginning January 1, 1909 is added to the imports of the fiscal year 1910.

The net imports of Class I and Class II wools amounted to 103,562,416 pounds, a decrease from the previous year of 159,525,391 pounds, altogether due to a heavy decrease in the imports of Class I, or clothing, wools. The net imports of carpet wools was 148,569,951 pounds, an increase of 99,010,014 pounds over the imports of the previous year. This increase is largely attributable to the Emergency Tariff law, under which wools other than carpet were subject to heavy duties, while carpet wools were admitted free of duty. The foreign wool was 47.46 per cent of the total amount retained for consumption but only 27.06 per cent of the fine wool retained, a decrease from last year of 19.36 per cent.

It is to be regretted that the figures for the exports of domestic wools for the fiscal years 1911 and 1912 are not available.

WOOL AND MOHAIR PRODUCED, IMPORTED, EXPORTED, AND RETAINED FOR CONSUMPTION.

| Fiscal Year. | Total Imports. | | Foreign Re-exports. | | Net Imports. | | Wool Production estimated. | Mohair Production estimated. | Total Domestic Exports. | Retained for Consumption. | Per cent of Foreign. | Fine.* | |
|--------------|----------------|-------------------|---------------------|-------------|-------------------|------------|----------------------------|------------------------------|-------------------------|---------------------------|----------------------|---------------------------|----------------------|
| | Pounds. | Classes I and II. | Class III. | Pounds. | Classes I and II. | Class III. | | | | | | Retained for Consumption. | Per cent of Foreign. |
| | Pounds. | Pounds. | Pounds. | Pounds. | Pounds. | Pounds. | Pounds. | Pounds. | Pounds. | Pounds. | | Pounds. | |
| 1909-10..... | 263,928,232 | 3,361,021 | 646,932 | 139,846,192 | 120,074,087 | | 328,110,749 | 3,600,000 | 47,520 | 591,583,508 | 43.94 | 471,509,421 | 29.66 |
| 1910-11..... | 137,647,641 | 7,147,259 | 1,058,440 | 45,414,054 | 84,027,888 | | 321,362,750 | 3,778,706 | † | 454,583,398 | 28.47 | 370,555,510 | 12.26 |
| 1911-12..... | 193,400,713 | 1,229,148 | 490,722 | 85,531,845 | 106,148,998 | | 318,547,900 | 3,900,000 | † | 514,128,743 | 37.28 | 407,979,745 | 20.96 |
| 1912-13..... | 195,293,255 | 3,241,448 | 1,181,313 | 80,883,313 | 109,986,781 | | 304,043,400 | 4,000,000 | 77,047 | 498,836,447 | 38.26 | 388,849,666 | 20.80 |
| 1913-14..... | 247,648,869 | 806,440 | 335,434 | 144,839,116 | 101,667,879 | | 296,175,300 | 4,500,000 | 335,348 | 546,846,947 | 45.08 | 445,179,068 | 32.54 |
| 1914-15..... | 308,083,429 | 5,742,431 | 1,517,503 | 236,631,246 | 64,192,249 | | 290,192,000 | 4,500,000 | 8,158,300 | 587,357,195 | 51.22 | 523,164,946 | 45.23 |
| 1915-16..... | 334,828,022 | 1,803,370 | | 423,735,453 | 109,268,999 | | 288,777,000 | 6,000,000 | 4,418,915 | 823,382,537 | 64.74 | 714,113,538 | 59.34 |
| 1916-17..... | 372,372,218 | 1,830,374 | | 302,869,173 | 67,672,671 | | 288,498,000 | 6,000,000 | 2,148,350 | 662,892,094 | 55.90 | 595,219,423 | 50.88 |
| 1917-18..... | 379,129,934 | 1,045,866 | 1,000 | 319,089,406 | 58,993,662 | | 285,573,000 | 6,000,000 | 993,143 | 668,662,925 | 56.54 | 609,669,263 | 52.33 |
| 1918-19..... | 422,414,664 | 605,372 | | 337,630,839 | 84,178,453 | | 299,921,000 | 6,000,000 | 545,717 | 727,184,575 | 58.02 | 643,006,122 | 52.51 |
| 1919-20..... | 427,578,038 | 12,923,418 | 338,023 | 342,428,872 | 71,887,725 | | 314,239,000 | 8,000,000 | 6,890,669 | 729,064,928 | 56.78 | 657,777,203 | 52.06 |
| 1920-21..... | 318,235,873 | 5,082,570 | 505,559 | 263,087,807 | 49,559,937 | | 302,207,000 | 7,000,000 | 5,583,669 | 616,271,075 | 50.73 | 566,711,138 | 46.42 |
| 1921-22..... | 255,087,236 | 2,737,914 | 216,955 | 103,562,416 | 148,569,951 | | 273,064,000 | 7,000,000 | 9,234,924 | 531,272,443 | 47.46 | 382,702,492 | 27.06 |
| 1922-23..... | | | | | | | 261,095,000 | 7,750,000 | | | | | |

Note: *Domestic production and all imports except carpet wools are covered by this term.

†No figures available for these years.

WOOL SUPPLY, 1888-1922,—DOMESTIC PRODUCTION ^a AND IMPORTS
LESS EXPORTS.

| Fiscal years ended June 30. | All wools. | Fine wools.* |
|-----------------------------------|----------------|----------------|
| | <i>Pounds.</i> | <i>Pounds.</i> |
| 1888-1892. Five years, total..... | 2,122,407,842 | 1,686,818,840 |
| Annual average, five years..... | 424,481,568 | 337,363,768 |
| 1893-1897. Five years, total..... | 2,549,920,592 | 2,070,423,829 |
| Annual average, five years..... | 509,984,118 | 414,084,766 |
| 1888-1897. Ten years, total..... | 4,672,328,434 | 3,757,242,669 |
| Annual average, ten years..... | 467,232,843 | 375,724,267 |
| 1898-1902. Five years, total..... | 1,988,771,621 | 1,582,374,537 |
| Annual average, five years..... | 397,755,324 | 316,474,907 |
| 1893-1902. Ten years, total..... | 4,538,692,213 | 3,652,798,366 |
| Annual average, ten years..... | 453,869,221 | 365,279,837 |
| 1903-1907. Five years, total..... | 2,476,984,249 | 1,925,618,882 |
| Annual average, five years..... | 495,396,850 | 385,123,776 |
| 1898-1907. Ten years, total..... | 4,465,755,870 | 3,507,993,419 |
| Annual average, ten years..... | 446,575,587 | 350,799,342 |
| 1908-1912. Five years, total..... | 2,541,688,925 | 2,060,912,139 |
| Annual average, five years..... | 508,337,785 | 412,182,428 |
| 1903-1912. Ten years, total..... | 5,018,673,174 | 3,986,531,021 |
| Annual average, ten years..... | 501,867,317 | 398,653,102 |
| 1913-1917. Five years, total..... | 3,107,304,820 | 2,654,513,190 |
| Annual average, five years..... | 621,460,964 | 530,902,636 |
| 1908-1917. Ten years, total..... | 5,648,993,747 | 4,715,425,329 |
| Annual average, ten years..... | 564,899,375 | 471,542,533 |
| 1918-1922. Five years, total..... | 3,239,055,946 | 2,825,866,218 |
| Annual average, five years..... | 647,811,189 | 565,173,243 |
| 1913-1922. Ten years, total..... | 6,346,360,766 | 5,480,379,408 |
| Annual average, ten years..... | 634,636,077 | 548,037,941 |

^aDoes not include estimated production of mohair.

*Includes all except carpet wools.

MOHAIR.

As no official statistics of the production of mohair in this country are available, we must rely upon estimates by the largest users in the country who place it this year at 7,750,000 pounds, an increase of 750,000 pounds over production of 1920 and 1921.

Texas, Oregon, New Mexico, California, and Arizona are principal sources of supply of domestic mohair.

182 NATIONAL ASSOCIATION OF WOOL MANUFACTURERS.

MOHAIR PRODUCTION IN THE UNITED STATES.
United States Census Reports and Commercial Estimates.

| Year. | Fleeces. | Weight of Mohair. |
|-----------|-----------|-------------------|
| | | <i>Pounds.</i> |
| 1900..... | 454,932 | 961,328 |
| 1910..... | 1,682,912 | 3,778,706 |
| 1912..... | | 4,000,000* |
| 1913..... | | 4,500,000* |
| 1914..... | | 4,500,000* |
| 1915..... | | 6,000,000* |
| 1916..... | | 6,000,000* |
| 1917..... | | 6,000,000* |
| 1918..... | | 6,000,000* |
| 1919..... | | 8,000,000* |
| 1920..... | | 7,000,000* |
| 1921..... | | 7,000,000* |
| 1922..... | | 7,750,000* |

*Commercial estimate.

The following table, compiled from official figures of the United States Department of Agriculture, shows the receipts, slaughter, and shipments of sheep at ten of the principal markets for ten months of 1922, January to October, inclusive. During the ten months the total receipts at the ten principal markets showed a decrease of 1,675,636 and the figures for slaughter were 1,629,747 smaller than those for the same months at the same markets in 1921. At the same time the shipments from these markets were 91,006 smaller than those for 1921.

RECEIPTS, SLAUGHTER, AND SHIPMENTS OF SHEEP AT TEN OF THE PRINCIPAL MARKETS FOR TEN MONTHS, JANUARY TO OCTOBER 31, 1922, COMPARED WITH THE SAME TEN MONTHS OF 1921. COMPILED FROM REPORTS OF THE BUREAU OF AGRICULTURAL ECONOMICS, UNITED STATES DEPARTMENT OF AGRICULTURE.

| | Receipts. | | Slaughter. | | Shipments. | |
|---------------------|------------|------------|------------|-----------|------------|-----------|
| | 1922. | 1921. | 1922. | 1921. | 1922. | 1921. |
| Buffalo..... | 918,187 | 1,080,998 | 150,072 | 192,781 | 766,315 | 886,617 |
| Chicago..... | 3,224,526 | 3,994,685 | 2,227,293 | 2,905,686 | 997,233 | 1,088,999 |
| Denver..... | 1,359,402 | 1,139,087 | 141,120 | 158,666 | 1,195,557 | 965,318 |
| East St. Louis..... | 556,054 | 553,313 | 355,218 | 344,610 | 200,848 | 208,703 |
| Jersey City..... | 1,580,175 | 1,680,180 | 1,580,175 | 1,680,180 | | |
| Kansas City..... | 1,355,156 | 1,567,560 | 851,945 | 1,189,124 | 480,036 | 392,223 |
| Omaha..... | 2,153,504 | 2,438,262 | 1,187,384 | 1,487,772 | 950,678 | 946,444 |
| St. Joseph..... | 616,676 | 803,129 | 489,201 | 621,712 | 124,820 | 179,346 |
| St. Paul..... | 367,813 | 501,390 | 229,569 | 230,431 | 125,006 | 244,780 |
| Sioux City..... | 169,490 | 218,015 | 116,777 | 147,539 | 51,390 | 70,459 |
| Total..... | 12,300,983 | 13,976,619 | 7,328,754 | 8,958,501 | 4,891,883 | 4,982,889 |

The next table shows by months the slaughter of sheep at the ten principal markets for the twelve months of 1921.

SLAUGHTER OF SHEEP AT TEN OF THE PRINCIPAL MARKETS BY MONTHS FOR THE CALENDAR YEAR 1921. COMPILED FROM REPORTS OF THE BUREAU OF AGRICULTURAL ECONOMICS, UNITED STATES DEPARTMENT OF AGRICULTURE.

| | Buffalo. | Chicago. | Denver. | East St. Louis. | Jersey City. | Kansas City. |
|----------------|----------|-----------|---------|--------------------|-----------------|-----------------|
| January..... | 23,673 | 294,576 | 17,240 | 41,035 | 143,092 | 129,725 |
| February..... | 21,900 | 242,487 | 16,795 | 20,333 | 132,799 | 119,958 |
| March..... | 22,580 | 304,506 | 20,247 | 15,336 | 125,150 | 130,016 |
| April..... | 17,720 | 249,854 | 14,724 | 13,924 | 133,617 | 122,363 |
| May..... | 11,949 | 255,104 | 10,683 | 33,265 | 164,230 | 133,121 |
| June..... | 10,475 | 299,373 | 9,451 | 65,608 | 200,595 | 97,271 |
| July..... | 12,347 | 236,411 | 10,587 | 43,945 | 194,172 | 73,853 |
| August..... | 23,390 | 343,226 | 15,317 | 56,582 | 223,961 | 113,365 |
| September..... | 22,003 | 317,630 | 15,631 | 25,170 | 158,372 | 142,438 |
| October..... | 26,744 | 362,519 | 27,991 | 29,412 | 204,192 | 127,014 |
| November..... | 26,718 | 262,761 | 15,462 | 25,252 | 162,073 | 56,696 |
| December..... | 23,390 | 214,208 | 6,302 | 21,163 | 122,271 | 61,608 |
| Total..... | 242,889 | 3,382,655 | 180,430 | 391,025 | 1,964,524 | 1,307,428 |

| | Omaha. | St. Joseph. | St. Paul. | Sioux City. | Total. |
|----------------|-----------|-------------|-----------|-------------|------------|
| January..... | 151,154 | 76,026 | 23,503 | 22,029 | 922,053 |
| February..... | 129,384 | 66,217 | 12,941 | 15,417 | 778,231 |
| March..... | 164,458 | 68,403 | 14,134 | 14,946 | 879,776 |
| April..... | 150,021 | 71,435 | 5,755 | 15,017 | 794,430 |
| May..... | 115,626 | 56,812 | 7,906 | 9,621 | 798,317 |
| June..... | 129,816 | 58,459 | 8,039 | 7,633 | 886,720 |
| July..... | 138,919 | 3,767 | 13,229 | 5,470 | 772,700 |
| August..... | 213,658 | 62,169 | 35,294 | 13,850 | 1,100,812 |
| September..... | 157,429 | 66,438 | 41,958 | 16,002 | 963,071 |
| October..... | 137,307 | 51,986 | 67,672 | 27,554 | 1,062,391 |
| November..... | 85,336 | 49,807 | 65,329 | 31,142 | 780,576 |
| December..... | 48,252 | 58,921 | 19,963 | 12,804 | 588,882 |
| Total..... | 1,621,360 | 730,440 | 315,723 | 191,485 | 10,327,959 |

The following table gives the total slaughter of sheep at sixty-seven markets for ten months of the calendar years 1920, 1921, and 1922. The total for the ten months of 1922 was 108,950 less than that for 1920, and 2,095,053 less than for the same period in the immediately preceding year. This marked decrease indicates that the inroads upon the flocks to pay indebtedness has been halted, and that the industry should return to normal conditions within a reasonable time.

TOTAL SLAUGHTER OF SHEEP AT SIXTY-SEVEN MARKETS FOR TEN MONTHS
JANUARY TO OCTOBER 1922, COMPARED WITH THE SAME MONTHS OF
1921 AND 1920. COMPILED FROM REPORTS OF BUREAU OF AGRICULTURAL ECONOMICS, U. S. A. DEPARTMENT OF AGRICULTURE

| | 1922. | 1921. | 1920. | Five Year Average 1917-1921. |
|---------------------|-----------|------------|-----------|------------------------------------|
| January | 925,436 | 1,100,784 | 921,651 | 935,085 |
| February | 761,023 | 934,586 | 811,993 | 776,773 |
| March | 779,955 | 1,052,566 | 791,921 | 808,617 |
| April | 677,890 | 988,440 | 708,521 | 777,797 |
| May | 852,298 | 1,014,987 | 705,844 | 763,373 |
| June | 923,080 | 1,092,512 | 844,787 | 855,426 |
| July | 955,790 | 1,005,884 | 1,001,186 | 956,660 |
| August | 1,020,682 | 1,335,426 | 1,098,430 | 1,055,821 |
| September | 1,005,228 | 1,199,712 | 1,216,628 | 1,139,395 |
| October | 1,069,024 | 1,340,562 | 978,395 | 1,172,868 |
| Total | 8,970,406 | 11,065,459 | 9,079,356 | |

PRICE
PER
POUND
\$ 2.80

DOMESTIC WOOLS

NATIONAL ASSOCIATION OF WOOL MANUFACTURERS

PRICE
PER
POUND
\$ 2.80

- OHIO FINE DELAINE UNWASHED
- - - OHIO 1/4 BLOOD - UNWASHED
- · - TERRITORY STAPLE - FINE & FINE MEDIUM - SCOURED BASIS
- · - TERRITORY COMBING - 1/2 BLOOD - SCOURED BASIS



BOSTON WOOL PRICES.

Boston prices of domestic wools in October for the last eleven years are shown in the table which follows:

COMPARATIVE PRICES OF DOMESTIC WOOL IN BOSTON, OCTOBER, 1912-1922.

| | 1922 | 1921 | 1920 | 1919 | 1918 | 1917 | 1916 | 1915 | 1914 | 1913 | 1912 |
|--|------|-------|------|-------|-------|-------|-------|-------|----------------------|-------|-------|
| OHIO, PENNSYLVANIA, AND WEST VIRGINIA. (Unwashed.) | | | | | | | | | | | |
| Fine..... | 48 | 28-29 | 42 | 67 | 67 | 63 | 32-33 | 26-27 | 23-24 | 20-21 | 23-24 |
| $\frac{1}{2}$ Blood..... | 51 | 30-31 | 42 | 80 | 78 | 75 | 39-40 | 34-35 | 27-28 | 23-24 | 29-30 |
| $\frac{3}{4}$ "..... | 47 | 26-27 | 40 | 67 | 78 | 75 | 40-42 | 36-37 | 26-27 | 23-24 | 30-31 |
| $\frac{1}{4}$ "..... | 44 | 25-26 | 38 | 64 | 77 | 75 | 40-42 | 35-36 | 26-26 $\frac{1}{2}$ | 23-24 | 30-31 |
| Fine Delaine..... | 55 | 35-36 | 60 | 83 | 75 | 75 | 36-37 | 30-31 | 24-25 | 22-23 | 28-29 |
| MICHIGAN, WISCONSIN, NEW YORK, ETC. (Unwashed.) | | | | | | | | | | | |
| Fine..... | 43 | 26-27 | 40 | 65 | 64 | 60 | 29-30 | 24-25 | 22-23 | 19-20 | 22-23 |
| $\frac{1}{2}$ Blood..... | 49 | 28-29 | 40 | 75 | 76 | 74 | 37-38 | 33-34 | 26-27 | 22-23 | 28-29 |
| $\frac{3}{4}$ "..... | 45 | 26-27 | 38 | 60 | 77 | 74 | 41-42 | 35-36 | 26-26 $\frac{1}{2}$ | 22-23 | 29-30 |
| $\frac{1}{4}$ "..... | 42 | 24-25 | 36 | 60 | 76 | 72 | 40-41 | 34-35 | 25-25 $\frac{1}{2}$ | 22-23 | 29-30 |
| Fine Delaine..... | 50 | 32-33 | 55 | 80 | 73 | 72-73 | 35-36 | 27-28 | 23-24 | 21-22 | 26-27 |
| KENTUCKY AND INDIANA (Unwashed.) | | | | | | | | | | | |
| $\frac{3}{4}$ Blood..... | 49 | 27-28 | 42 | 63 | 79 | 80 | 44-45 | 37-38 | 27-27 $\frac{1}{2}$ | 24-25 | 31-32 |
| $\frac{1}{4}$ "..... | 45 | 25-26 | 40 | 62 | 78 | 80 | 43-44 | 37-38 | 25-26 | 24-25 | 31-32 |
| Braid..... | 36 | 15-17 | 28 | 35 | 68 | 67-68 | 36-37 | 33-34 | 22-23 | 23-24 | 26-27 |
| MISSOURI, IOWA, AND ILLINOIS. (Unwashed.) | | | | | | | | | | | |
| $\frac{3}{4}$ Blood..... | 46 | 24-25 | 38 | 60 | 76 | 72 | 40-42 | 35-36 | 25 $\frac{1}{2}$ -26 | 22-23 | 29-30 |
| $\frac{1}{4}$ "..... | 43 | 23-24 | 36 | 60 | 75 | 72 | 39-40 | 35-36 | 25-26 | 22-23 | 29-30 |
| Braid..... | 35 | 15-16 | 28 | 35 | 67 | 67-68 | 36-37 | 31-32 | 21-22 | 22-23 | 26-27 |
| TEXAS. (Scoured Basis.) | | | | | | | | | | | |
| 12 mos., fine and fine medium..... | 1.25 | 65-75 | 1.00 | 1.80 | 1.75 | 1.70 | 80-85 | 67-68 | 56-58 | 50-52 | 60-62 |
| Spring, fine and fine medium..... | 1.10 | 55-60 | 85 | 1.60 | 1.60 | 1.50 | 70-75 | 60-62 | * | * | * |
| Fall, fine and fine medium..... | 95 | 50-55 | 65 | 1.50 | 1.50 | 1.48 | 57-58 | 55-57 | 45-47 | 42-43 | 48-50 |
| CALIFORNIA. (Scoured Basis.) | | | | | | | | | | | |
| 12 months, fine..... | 1.20 | 70-75 | 90 | 1.80 | 1.75 | 1.68 | 80-85 | 65-67 | * | * | * |
| Spring, fine..... | 1.00 | 55-60 | 75 | 1.60 | 1.60 | 1.50 | 65-70 | 60-62 | * | * | * |
| Fall, fine..... | 90 | 50-55 | 50 | 1.30 | 1.47 | 1.45 | 60-62 | 54-56 | * | * | * |
| TERRITORY WOOL: MONTANA, WYOMING, UTAH, IDAHO, ORE- GON, ETC. (Scoured Basis.) | | | | | | | | | | | |
| Staple, fine and fine medium..... | 1.35 | 80-85 | 1.20 | 2.00 | 1.85 | 1.80 | 88-90 | 70-72 | 58-60 | 52-54 | 67-68 |
| Clothing, fine and fine medium..... | 1.25 | 60-65 | 1.00 | 1.85 | † | 1.65 | 83-85 | 67-68 | 54-55 | 47-49 | 60-62 |
| $\frac{1}{2}$ Blood..... | 1.20 | 68-72 | 90 | 1.70 | 1.78 | 1.68 | * | 68-69 | * | * | * |
| $\frac{3}{4}$ "..... | 95 | 50-55 | 75 | 1.35 | 1.55 | 1.42 | * | 66-67 | * | * | * |
| $\frac{1}{4}$ "..... | 80 | 38-42 | 55 | 1.15 | 1.40 | 1.28 | * | 62-64 | * | * | * |
| NEW MEXICO. (Scoured Basis.) | | | | | | | | | | | |
| No. 1..... | 1.20 | 65-70 | 95 | 1.56 | 1.65 | 1.70 | 78-80 | 64-66 | 54-55 | 47-48 | 58-60 |
| No. 2..... | 1.10 | 55-58 | 75 | 1.40 | 1.55 | 1.58 | 63-65 | 58-60 | 46-48 | 42-43 | 52-54 |
| No. 3..... | 85 | 38-40 | 40 | 1.10 | 1.35 | 1.38 | 58-60 | 53-55 | 38-40 | 37-38 | 45-47 |
| GEORGIA AND SOUTHERN. (Unwashed.) | | | | | | | | | | | |
| ..... | 42 | 19-21 | 25 | 58-64 | 68-70 | 70-71 | 37-38 | 33-34 | 24-25 | 22-23 | 28-30 |

*Grade not quoted.

†But little in the market.

The following tables show the prices by months during 1922 for various grades of domestic and foreign wools used in preparation of the accompanying price charts.

PRICES OF DOMESTIC WOOLS, 1922, BY MONTHS.

| | Ohio Fine Delaine Unwashed. | Ohio $\frac{1}{4}$ -Blood Grease. | Territory, Staple Fine and Fine Medium. Scoured Basis. | Territory Combing. $\frac{1}{2}$ -Blood. Scoured Basis. |
|----------------|-----------------------------------|--------------------------------------|---|--|
| | <i>Cents.</i> | <i>Cents.</i> | <i>Cents.</i> | <i>Cents.</i> |
| January..... | 42 | 33 | 100 | 90 |
| February..... | 48 | 35 | 108 | 95 |
| March..... | 48 | 37 | 100 | 95 |
| April..... | 47 | 37 | 105 | 100 |
| May..... | 51 | 40 | 135 | 110 |
| June..... | 58 | 48 | 140 | 115 |
| July..... | 55 | 41 | 128 | 115 |
| August..... | 54 | 42 | 130 | 118 |
| September..... | 55 | 44 | 135 | 120 |
| October..... | 55 | 45 | 130 | 110 |
| November..... | 55 | 47 | 135 | 115 |
| December..... | 57 | 50 | 140 | 125 |

PRICES OF FOREIGN WOOLS, 1922, BY MONTHS.

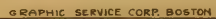
| | Australian Choice Sydney and Geelong 70's Scoured Basis. | Australian Sydney and Geelong Combing 64's. Scoured Basis. | South African 64's. Scoured Basis. | Montevideo 50's. Grease. | Buenos Aires 40 44's. Grease. |
|---------------|---|--|--|--------------------------------|--|
| | <i>Cents.</i> | <i>Cents.</i> | <i>Cents.</i> | <i>Cents.</i> | <i>Cents.</i> |
| January..... | 129 | 114 | 109 | 36 | 23 |
| February..... | 132 | 118 | 113 | 37 | 25 |
| March..... | 132 | 118 | 113 | 39 | 27 |
| April..... | 128 | 117 | 112 | 40 | 30 |
| May..... | 133 | 120 | 115 | 45 | 32 |
| June..... | 132 | 125 | 120 | 48 | 32 |
| July..... | 132 | 125 | 120 | 50 | 34 |
| August..... | 132 | 125 | 120 | 51 | 34 |
| September... | 132 | 125 | 120 | 52 | 35 |
| October..... | 141 | 135 | 130 | 52 | 37 |
| November... | 146 | 138 | 133 | 60 | 40 |
| December... | 150 | 135 | 130 | 60 | 43 |

BOSTON RECEIPTS AND SHIPMENTS OF WOOL.

The following table shows in separate columns the receipts at Boston of domestic and foreign wools during the calendar year, and also the total receipts, with the reported yearly

PRICE
PER
POUND
2.80

PRICE
PER
POUND
\$ 2.00



shipments of all wools for a period of thirteen years, as compiled by officials of the Boston Chamber of Commerce. The receipts for the year were 90,735,369 pounds larger than those of the preceding year, the increase of domestic wools being 47,231,314 pounds and of foreign wools 43,504,055 pounds. The total receipts, both domestic and foreign, were 433,807,695 pounds, a total exceeded in only four of the thirteen years embraced in the table.

Although the total receipts were over ninety million pounds more than in 1921, (of which 46,477,797 pounds were in bond December 31, 1922) the shipments by rail were 12,739,725 pounds less. Of the 387,329,898 pounds received, and out of bond only twenty-six per cent was transported by sea and by the railroads, which is by far the smallest percentage for any year listed. The 331,350,020 pounds, the difference between the receipts and the shipments, can hardly be accounted for by the wools held in bond or in warehouses in Boston or in unreported shipments. It seems, therefore, that many more pounds than usual were transported by motor trucks, which have undoubtedly been making great inroads into the business of the railroad companies.

YEARLY RECEIPTS AND SHIPMENTS OF WOOL AT BOSTON FOR TWELVE YEARS 1911-1922, INCLUSIVE.

| YEAR. | RECEIPTS. | | | SHIPMENTS REPORTED. |
|-----------|----------------|----------------|----------------|---------------------|
| | Domestic. | Foreign. | Total. | All Wools. |
| | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i> |
| 1911..... | 230,391,364 | 67,759,223 | 298,150,587 | 217,239,723 |
| 1912..... | 236,458,198 | 124,143,562 | 360,601,760 | 276,912,464 |
| 1913..... | 161,800,680 | 63,336,325 | 225,137,005 | 183,710,214 |
| 1914..... | 190,730,629 | 144,145,491 | 334,876,120 | 267,149,305 |
| 1915..... | 181,700,678 | 247,914,385 | 429,615,063 | 272,473,422 |
| 1916..... | 205,194,677 | 234,998,488 | 440,193,165 | 302,868,263 |
| 1917..... | 210,124,902 | 296,461,275 | 506,586,177 | 279,850,815 |
| 1918..... | 183,296,708 | 320,180,422 | 503,477,130 | 200,558,487 |
| 1919..... | 213,904,935 | 265,112,318 | 479,017,253 | 149,646,027 |
| 1920..... | 105,706,601 | 168,356,516 | 274,063,117 | 136,040,250 |
| 1921..... | 143,720,341 | 199,351,985 | 343,072,326 | 115,197,400 |
| 1922..... | 190,951,655 | 242,856,040 | 433,807,695 | 102,457,675 |

The following tables show the annua' receipts of domestic and foreign wool in Boston by months for the years 1919 to 1922, inclusive, and the shipments in pounds from Boston as reported by the several railroads and by sea for the year 1922:

SHIPMENTS OF WOOL FROM BOSTON IN 1922 BY MONTHS (POUNDS).
Boston Chamber of Commerce, James A. McKibben, Secretary.

1922.

| RAILROADS. | 1922. | | | | | | | | | | | | |
|--|-----------|------------|------------|------------|---------------------|------------|------------|------------|------------|------------|-------------|-------------|----------------------|
| | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. | Total |
| Boston & Albany R.: | | | | | | | | | | | | | |
| Boston & Albany Grand Junction New York, New Haven & Hartford R. R.: | 2,584,000 | 3,001,000 | 2,979,000 | 2,267,000 | 2,947,000 58,000 | 2,695,000 | 2,352,000 | 2,898,315 | 3,806,000 | 2,593,000 | 2,753,000 | 1,764,000 | 32,639,315 58,000 |
| Boston & Maine R.: | 4,629,000 | 3,676,000 | 1,871,000 | 2,034,000 | 2,814,000 | 2,312,000 | 1,698,000 | 1,633,875 | 2,144,000 | 3,519,000 | 3,101,000 | 2,427,000 | 31,858,875 |
| Terminal | 1,365,000 | 1,516,000 | 855,000 | 786,000 | 880,000 | 482,000 | 1,338,000 | 6,228,185 | 3,241,000 | 6,230,000 | 4,960,000 | 4,061,000 | 31,942,185 |
| Mystic Wharf | 84,000 | 161,000 | 110,000 | 366,000 | 1,242,000 | 359,000 | 4,000 | 116,700 | 83,000 | 869,000 | 176,000 | 79,000 | 651,700 |
| Ry sea. | 29,000 | | 67,000 | 366,000 | 1,242,000 | 359,000 | 1,922,000 | 291,500 | 83,000 | 869,000 | 79,000 | | 5,307,600 |
| Total each month. | 8,691,000 | 8,354,000 | 5,882,000 | 5,453,000 | 7,941,000 | 5,848,000 | 7,314,000 | 11,168,675 | 9,274,000 | 13,211,000 | 11,069,000 | 8,252,000 | 102,457,675 |
| Total after January 1, 1922. | 8,691,000 | 17,045,000 | 22,927,000 | 28,380,000 | 36,321,000 | 42,169,000 | 49,483,000 | 60,651,675 | 69,925,675 | 83,136,675 | 94,205,675 | 102,457,675 | 102,457,675 |
| Total after January 1, 1921. | 8,338,200 | 19,336,200 | 35,179,200 | 47,775,200 | 58,478,200 | 66,410,200 | 75,096,200 | 85,224,200 | 92,951,200 | 99,603,200 | 107,744,400 | 115,197,400 | 115,197,400 |

WOOL IMPORTED INTO BOSTON, NEW YORK, PHILADELPHIA, AND OTHER PORTS.
BY PRINCIPAL COUNTRIES OF PRODUCTION.

| YEAR ENDED JUNE 30. | Russia. | Turkey. | United Kingdom. | Argentina. | Uruguay. | Chinese Empire. | British E. Indies. | British Oceania | All other Countries. | TOTAL. |
|------------------------|----------------|----------------|--------------------|----------------|----------------|--------------------|-----------------------|--------------------|-------------------------|----------------|
| | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i> |
| 1910..... | 13,263,175 | 13,521,623 | 37,097,134 | 31,082,184 | 8,789,785 | 46,599,637 | 16,603,135 | 68,199,625 | 15,128,955 | 250,285,253 |
| 1911..... | 12,944,356 | 9,552,982 | 12,854,102 | 17,891,376 | 711,525 | 30,035,965 | 10,831,635 | 20,494,162 | 9,679,750 | 125,015,853 |
| 1912..... | 20,253,067 | 13,682,915 | 13,656,409 | 27,621,628 | 3,216,988 | 32,636,950 | 15,725,299 | 38,494,677 | 11,938,839 | 177,226,772 |
| 1913..... | 24,695,118 | 15,457,035 | 19,330,440 | 26,742,584 | 3,718,873 | 35,572,181 | 10,212,091 | 31,852,863 | 12,680,536 | 180,261,721 |
| 1914..... | 22,845,353 | 10,357,809 | 22,023,698 | 42,276,542 | 13,017,718 | 31,077,858 | 14,149,719 | 64,697,584 | 14,141,199 | 236,080,682 |
| 1915..... | 2,290,408 | 4,729,540 | 16,446,538 | 77,808,041 | 16,597,623 | 36,717,754 | 2,120,343 | 75,865,711 | 40,981,966 | 273,557,924 |
| 1916..... | 3,309,879 | 331,191 | 23,326,562 | 129,163,383 | 9,508,756 | 47,435,467 | 11,506,144 | 121,361,539 | *101,579,848 | 448,494,434 |
| 1917..... | ..... | 9,889 | 2,314,578 | 207,970,092 | 37,601,961 | 30,471,413 | 449,848 | 1,772,257 | *102,551,513 | 350,108,467 |
| 1918..... | 3,124,493 | ..... | 138,605 | 181,154,575 | 18,409,011 | 26,879,744 | 53,557 | 32,366,894 | *92,777,054 | 354,903,933 |
| 1919..... | 1,582,633 | 128,548 | 2,038,532 | 139,451,795 | 41,107,665 | 40,243,343 | 4,919,916 | 93,032,750 | *59,666,460 | 422,414,985 |
| 1920..... | 4,889,760 | 9,543,322 | 13,978,974 | 139,601,543 | 47,178,558 | 32,161,364 | 8,640,759 | 75,808,632 | *95,775,126 | 427,578,038 |
| 1921..... | 1,025,707 | 3,339,327 | 16,263,610 | 104,023,117 | 36,186,291 | 26,012,166 | 536,141 | 68,880,380 | *61,969,134 | 318,235,873 |
| 1922..... | 1,182,065 | 2,788,182 | 23,665,017 | 34,019,926 | 23,559,433 | 68,455,152 | 29,560,832 | 43,755,239 | *28,101,390 | 255,087,236 |

*78,430,380 pounds of wool included in "All other Countries" came from British South Africa in 1916, 31,970,422 pounds in 1917, 61,027,252 pounds in 1918, 57,565,601 pounds in 1919, 49,635,777 pounds in 1920, 25,932,779 pounds in 1921, and 8,768,799 pounds in 1922.

WOOL IMPORTED INTO MASSACHUSETTS, NEW YORK, AND PHILADELPHIA.
BY PORTS AND CLASSES.

Mohair, Alpaca, and similar hairs are included with Class II. wool. a

| GROSS IMPORTS, YEAR ENDED JUNE 30. | MASSACHUSETTS. | | | NEW YORK. | | | PHILADELPHIA. | | | TOTAL FOR THREE PORTS |
|--|----------------|------------|------------|------------|-----------|------------|---------------|-----------|------------|--------------------------|
| | Class I. | Class II. | Class III. | Class I. | Class II. | Class III. | Class I. | Class II. | Class III. | |
| | Pounds. | Pounds. | Pounds. | Pounds. | Pounds. | Pounds. | Pounds. | Pounds. | Pounds. | Pounds. |
| 1910. | 79,232,943 | 17,022,966 | 27,476,785 | 14,399,419 | 1,574,625 | 66,098,923 | 13,081,388 | 4,635,818 | 26,762,386 | 250,285,253 |
| 1911. | 32,689,348 | 5,532,189 | 20,117,152 | 1,327,443 | 252,927 | 43,540,674 | 2,205,818 | 531,663 | 18,818,639 | 125,015,853 |
| 1912. | 54,443,667 | 5,840,571 | 25,538,651 | 4,189,259 | 473,126 | 56,040,867 | 6,878,019 | 1,162,021 | 22,660,591 | 177,226,772 |
| 1913. | 50,887,889 | 8,468,552 | 27,131,377 | 3,652,043 | 692,695 | 55,702,561 | 6,483,156 | 2,575,977 | 24,667,461 | 180,261,721 |
| 1914. | 100,371,290 | 8,630,104 | 23,809,154 | 11,409,227 | 2,863,728 | 53,845,615 | 9,364,414 | 1,094,239 | 23,199,709 | 236,080,682 |
| 1915. | 161,405,006 | 8,934,849 | 7,926,024 | 26,414,800 | 1,849,884 | 52,391,984 | 8,822,355 | 1,097,321 | 4,715,701 | 273,557,924 |
| 1916. | 230,947,637 | 10,152,641 | 12,916,602 | 76,740,485 | 6,389,584 | 86,270,319 | 15,141,718 | 702,755 | 9,223,693 | 448,494,434 |
| 1917. | 207,692,666 | 8,335,661 | 1,743,571 | 53,586,228 | 7,874,856 | 59,316,623 | 5,019,801 | 105,817 | 6,433,244 | 350,108,467 |
| 1918. | 247,214,072 | 2,549,498 | 3,785,855 | 38,460,632 | 4,165,675 | 48,808,361 | 3,790,910 | 21,343 | 6,107,587 | 354,903,933 |
| 1919. | 223,758,791 | 7,281,606 | 3,705,012 | 90,613,838 | 2,327,114 | 66,112,178 | 1,263,216 | 93,467 | 13,279,813 | 408,635,035 |
| 1920. | 250,346,641 | 7,828,275 | 7,444,971 | 67,283,148 | 8,987,784 | 55,808,941 | 3,270,887 | 699,179 | 8,857,037 | 410,600,783 |
| 1921. | 159,559,012 | 12,466,382 | 5,260,986 | 41,493,319 | 2,571,501 | 34,982,125 | 4,298,128 | 647,429 | 6,821,460 | 268,100,342 |
| 1922. | 25,955,775 | 65,838,337 | 20,567,681 | 4,289,362 | 3,294,941 | 58,111,746 | 2,129,596 | 3,579,371 | 33,883,777 | 217,649,986 |

NOTE.—The wool imported into Massachusetts, New York, and Philadelphia in 1922 comprises 85 per cent of the total quantity of wool imported into the United States. The imports of wool into all other districts for 1922 are Class I, 446,153; Class II, 766,795; Class III, 36,224,302, making a total of 37,437,250 pounds.

(a) Under the designation, Combing or Class II, many wools are now listed in the official statistics which do not fall within the definition of Class II wools contained in earlier tariff laws. The largely increased imports for the year 1922 are thus explained.

IMPORTS OF WOOL BY PORTS AND CLASSES.

The following tables show that the total imports of wool were 63,148,637 pounds less than in the fiscal year 1921. Though reducing her importations of Class I wools by 133,603,237 pounds, Massachusetts retained her supremacy, receiving four times the quantity of those wools taken by New York and Philadelphia combined. The total importation, including mohair, into the three ports was 217,649,986.

WOOL IMPORTED INTO MASSACHUSETTS, NEW YORK, AND
PHILADELPHIA, BY PORTS AND CLASSES.

MASSACHUSETTS:

| | |
|---------------|------------|
| Class I | 25,955,775 |
| “ II* | 65,838,337 |
| “ III | 20,567,081 |

NEW YORK:

| | |
|---------------|------------|
| Class I | 4,289,362 |
| “ II* | 3,294,941 |
| “ III | 58,111,746 |

PHILADELPHIA:

| | |
|---------------|------------|
| Class I | 2,129,596 |
| “ II* | 3,579,371 |
| “ III | 33,883,777 |

| | |
|-------------|-------------|
| Total | 217,649,986 |
|-------------|-------------|

*Includes mohair.

Note: These figures represent 85 per cent of the total quantity of wool imported into all the ports of the United States.

In 1922, fiscal year, the imports at all ports were:

| | |
|-----------------|-------------|
| Class I | 32,820,886 |
| “ II | 69,232,960 |
| Mohair | 4,246,484 |
| Class III | 148,786,906 |
| <hr/> | |
| Total | 255,087,236 |

The three Customs Districts of Massachusetts, New York, and Philadelphia are the great receiving ports for foreign wools, but quite a number of others also receive considerable quantities. Many ports listed last year received no wool this year, and only two new ones, Duluth and Superior, with 24,093 pounds and Tennessee with only 13 pounds appear. The imports at San Francisco declined 9,778,981 pounds; Washington decreased 3,937,629 pounds; Buffalo, 2,011,779 pounds; Vermont, 4,609,994 pounds, and Michigan, 821,957 pounds. The total imports into all other districts decreased 12,698,281 pounds. The following table shows the imports of wool into all ports in the fiscal year 1922:

IMPORTS OF WOOL INTO THE UNITED STATES BY CUSTOMS DISTRICTS DURING
THE FISCAL YEAR ENDED JUNE 30, 1922.

| | Class I. Clothing. | Class II.* Combing. | Class III. Carpet. | Total. |
|---|-----------------------|------------------------|-----------------------|----------------|
| | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i> |
| Buffalo..... | | | 24,153 | 24,153 |
| Chicago..... | 272,857 | 14,675 | | 287,532 |
| Dakota..... | 2,026 | | | 2,026 |
| Duluth and Superior..... | 24,093 | | | 24,093 |
| Maine and New Hampshire..... | 8,172 | 10,205 | 3,337 | 21,714 |
| Massachusetts..... | 25,955,775 | 65,838,337 | 20,567,081 | 112,361,193 |
| Michigan..... | 47,213 | | | 47,213 |
| New York..... | 4,289,362 | 3,294,941 | 58,111,746 | 65,696,049 |
| Oregon..... | 31,097 | 6,841 | 10,628,223 | 10,666,161 |
| Philadelphia..... | 2,129,596 | 3,579,371 | 33,883,777 | 39,592,744 |
| Rhode Island..... | 35,021 | 671,578 | 150 | 706,749 |
| St. Lawrence..... | 5,158 | | | 5,158 |
| San Francisco..... | 480 | 23,958 | 19,533,079 | 19,557,517 |
| Tennessee..... | | 13 | | 13 |
| Vermont..... | 800 | | | 800 |
| Washington..... | | 31,041 | 6,035,360 | 6,066,401 |
| Wisconsin..... | 19,236 | 8,484 | | 27,720 |
| Total: Massachusetts, New York and Philadelphia..... | 32,374,733 | 72,712,649 | 112,562,604 | 217,649,986 |
| Total: All other districts..... | 446,153 | 766,795 | 36,224,302 | 37,437,250 |
| Total..... | 32,820,886 | 73,479,444 | 148,786,906 | 255,087,236 |

*Includes Mohair and many wools not covered by the definition of Class II wools contained in earlier tariff laws.

194 NATIONAL ASSOCIATION OF WOOL MANUFACTURERS.

COUNTRIES OF PRODUCTION AND IMMEDIATE SHIPMENT.

The countries of production and immediate shipment of wool imported into the United States during the fiscal year ended June 30, 1922 and the quantity of wool from each are shown in the following table which is compiled from the "Monthly Summaries" of the Bureau of Foreign and Domestic Commerce, Department of Commerce.

WOOL IMPORTED INTO THE UNITED STATES DURING THE FISCAL YEAR ENDED
JUNE 30, 1922, BY COUNTRIES OF PRODUCTION, IMMEDIATE SHIPMENT,
AND CLASSES.

Compiled from Reports of United States Bureau of Foreign and Domestic Commerce.

| COUNTRIES OF PRODUCTION. | Countries of Immediate Shipment. | Class I - Clothing. | Class II - | | Class III - Carpet. | TOTAL. |
|-----------------------------------|----------------------------------|---------------------|------------|---|---------------------|-----------|
| | | | Comb- ing. | Hair of the An- gora Goat, Alpaca, etc. | | |
| | | pounds. | pounds. | pounds. | pounds. | pounds. |
| EUROPE: | | | | | | |
| Belgium..... | Belgium..... | | | | 95,618 | 95,618 |
| Bulgaria..... | Canada..... | | | | 56,056 | 56,056 |
| | Czechoslovakia..... | | | | 39,401 | 39,401 |
| | Germany..... | | | | 55,446 | 55,446 |
| Total..... | | | | | 150,903 | 150,903 |
| Czechoslovakia.. | Czechoslovakia..... | | | | 18,887 | 18,887 |
| | Italy..... | | | | 210,088 | 210,088 |
| Total..... | | | | | 228,975 | 228,975 |
| Denmark..... | Denmark..... | 1,320 | 32,102 | | 358,873 | 392,295 |
| Finland..... | Norway..... | 21 | | | | 21 |
| France..... | France..... | 12,646 | | | 1,917,172 | 1,929,818 |
| | Germany..... | 1,387 | | 7,436 | 1,753,384 | 1,762,207 |
| | Belgium..... | | | 8,531 | 8,531 | 8,531 |
| Germany..... | France..... | | | | 13,534 | 13,534 |
| | Italy..... | | | | 117,987 | 117,987 |
| | Switzerland..... | | | | 82,284 | 82,284 |
| Total..... | | 1,387 | | 7,436 | 1,975,720 | 1,984,543 |
| Greece and Greece in Europe: | | | | | | |
| Greece..... | Greece..... | | | | 46,366 | 46,366 |
| Greece in Europe | Greece in Europe..... | | | | 14,135 | 14,135 |
| Total Greece and Greece in Europe | | | | | 60,501 | 60,501 |
| Iceland and Faroe Islands.. | Iceland and Faroe Islands..... | | | | 572,663 | 572,663 |
| | Canada..... | | | | 35,042 | 35,042 |
| | Denmark..... | | | | 663,427 | 663,427 |
| | England..... | | | | 15,972 | 15,972 |
| Total..... | | | | | 1,287,104 | 1,287,104 |

WOOL IMPORTED INTO THE UNITED STATES, ETC.—*Continued.*

| COUNTRIES OF PRODUCTION. | Countries of Immediate Shipment. | Class I — Clothing. | Class II — | | Class III — Carpet. | TOTAL. |
|-------------------------------------|-------------------------------------|---------------------|----------------|--------------------------------------|---------------------|----------------|
| | | | Comb-ing. | Hair of the Angora Goat, Alpaca etc. | | |
| | | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i> |
| Italy..... | Italy..... | 163,025 | 53 | | 3,666,900 | 3,829,978 |
| | England..... | | | | 11,949 | 11,949 |
| | France..... | | | | 36,858 | 36,858 |
| | Switzerland..... | | | | 55,023 | 55,023 |
| Total..... | | 163,025 | 53 | | 3,770,730 | 3,933,808 |
| Jugoslavia, Albania, and Fiume..... | Jugoslavia, Albania, and Fiume..... | | | | 11,332 | 11,332 |
| | Czechoslovakia..... | | | | 122,729 | 122,729 |
| | England..... | | | | 11,694 | 11,694 |
| | Germany..... | | | | 18,630 | 18,630 |
| Total..... | | | | | 164,385 | 164,385 |
| Latvia..... | Latvia..... | 5,718 | | | | 5,718 |
| Portugal..... | Belgium..... | | | | 29,405 | 29,405 |
| | England..... | | | | 691,676 | 691,676 |
| | France..... | | | | 56,027 | 56,027 |
| | Switzerland..... | | | | 595,450 | 595,450 |
| Total..... | | | | | 1,372,558 | 1,372,558 |
| Russia in Europe..... | Russia in Europe..... | | | | 48,406 | 48,406 |
| | England..... | | | 430 | 1,073,637 | 1,074,067 |
| Total..... | | | | 430 | 1,122,043 | 1,122,473 |
| Spain..... | Spain..... | 99,857 | | | 381,049 | 480,906 |
| | France..... | | | | 124,330 | 124,330 |
| Total..... | | 99,857 | | | 505,379 | 605,236 |
| Switzerland..... | Switzerland..... | | | | 331,524 | 331,524 |
| | Belgium..... | | | | 3,847 | 3,847 |
| | France..... | | | | 54,615 | 54,615 |
| | Italy..... | | | | 36,717 | 36,717 |
| Total..... | | | | | 426,703 | 426,703 |
| Turkey in Europe..... | Turkey in Europe..... | | | 500,542 | 235,344 | 735,886 |
| | England..... | | | 201,549 | 80,504 | 282,053 |
| | France..... | | | | 255,167 | 255,167 |
| Total..... | | | | 702,091 | 571,015 | 1,273,106 |
| Ukraine..... | Germany..... | | | | 162,059 | 162,059 |
| UNITED KINGDOM: England..... | England..... | 736,761 | 1,259,981 | 152,109 | 1,304,120 | 3,452,971 |
| | Scotland..... | | 51,285 | | 342,999 | 394,284 |
| Total..... | | 736,761 | 1,311,266 | 152,109 | 1,647,119 | 3,847,255 |
| Ireland..... | Ireland..... | | | | 592,936 | 592,936 |
| | England..... | 2,172 | 12,147 | | 34,103 | 48,422 |
| | Scotland..... | | | | 5,343 | 5,343 |
| Total..... | | 2,172 | 12,147 | | 632,382 | 646,701 |
| Scotland..... | Scotland..... | 54,112 | 276,497 | | 16,090,783 | 16,421,392 |
| | Canada..... | | | | 22,940 | 22,940 |
| | England..... | 15 | 233,411 | | 2,493,303 | 2,726,729 |
| Total..... | | 54,127 | 509,908 | | 18,607,026 | 19,171,061 |
| Total United Kingdom..... | | 793,060 | 1,833,321 | 152,109 | 20,886,527 | 23,665,017 |
| Total Europe..... | | 1,077,034 | 1,865,476 | 862,066 | 35,056,265 | 38,860,841 |

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WOOL IMPORTED INTO THE UNITED STATES, ETC.—*Continued.*

| COUNTRIES OF PRODUCTION. | Countries of Immediate Shipment. | Class I—Clothing. | Class II— | | Class III—Carpet. | TOTAL. |
|--|--|-------------------|----------------|---------------------------------------|-------------------|----------------|
| | | | Comb-ing. | Hair of the Angora Goat, Alpaca, etc. | | |
| | | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i> |
| ASIA: | | | | | | |
| Aden | Aden | | | | 667 | 667 |
| Armenia and Kurdistan | France | | | | 60,566 | 60,566 |
| British India | British India | | | | 2,989,538 | 2,989,538 |
| | Canada | | | | 19,566 | 19,566 |
| | England | 117,175 | 92,060 | 79,252 | 26,263,241 | 26,551,728 |
| Total | | 117,175 | 92,060 | 79,252 | 29,272,345 | 29,560,832 |
| China | (China | 73,992 | 678,222 | 328,724 | 66,679,144 | 67,760,082 |
| | England | 67,855 | 9,524 | 11,390 | 224,153 | 312,922 |
| | France | | | | 80,194 | 80,194 |
| | Germany | | | | 49,732 | 49,732 |
| | Kwantung | | | | 252,222 | 252,222 |
| Total | | 141,847 | 687,746 | 340,114 | 67,285,445 | 68,455,152 |
| Far Eastern Republic | (Far Eastern Republic | | | | 214,416 | 214,416 |
| | England | | | | 169,488 | 169,488 |
| Total | | | | | 383,904 | 383,904 |
| Greece in Asia | (Greece in Asia | 660 | | | 56,943 | 57,603 |
| | England | | | | 71,409 | 71,409 |
| Total | | 660 | | | 128,352 | 129,012 |
| Hejza, Arabia, and Mesopotamia | Hejaz, Arabia, and Mesopotamia | | | | 600,734 | 600,734 |
| Palestine and Syria | (Palestine and Syria | 600 | | | 219,789 | 220,389 |
| | England | | | | 82,825 | 82,825 |
| | France | | | | 398,447 | 398,447 |
| | Turkey in Asia | | 507 | | | 507 |
| Total | | 600 | 507 | | 701,061 | 702,168 |
| Persia | (England | | | 20,853 | 18,229 | 39,082 |
| | France | | | | 140,550 | 140,550 |
| Total | | | | 20,853 | 158,779 | 179,632 |
| Russia in Asia | England | | | | 59,592 | 59,592 |
| Straits Settlements | Straits Settlements | 320 | | | | 320 |
| Turkey in Asia | (Turkey in Asia | | | | 278,960 | 278,960 |
| | Belgium | | | | 6,099 | 6,099 |
| | England | | 187,645 | 276,657 | 300,698 | 765,000 |
| | France | | | | 219,729 | 219,729 |
| | Germany | | | | 20,921 | 20,921 |
| | Greece in Asia | | | | 34,768 | 34,768 |
| | Italy | | | | 109,929 | 109,929 |
| | Switzerland | | | | 49,844 | 49,844 |
| | Turkey in Europe | | | 29,826 | | 29,826 |
| Total | | | 187,645 | 306,483 | 1,020,948 | 1,515,076 |
| Total Asia | | 260,602 | 967,958 | 746,702 | 99,672,393 | 101,647,655 |

WOOL IMPORTED INTO THE UNITED STATES, ETC.—Continued.

| COUNTRIES OF PRODUCTION. | Countries of Immediate Shipment | Class I - Clothing. | Class II - | | Class III - Carpet. | TOTAL. |
|---------------------------|---------------------------------|---------------------|------------|---------------------------------------|---------------------|------------|
| | | | Comb-ing. | Hair of the Angora Goat, Alpaca, etc. | | |
| | | Pounds. | Pounds. | Pounds. | Pounds. | Pounds. |
| AFRICA: | | | | | | |
| Algeria and Tunis..... | Algeria and Tunis.. | 4,752 | | | | 4,752 |
| British South Africa..... | British South Africa | 1,842,901 | 4,499,824 | 1,003,713 | 100,493 | 7,446,931 |
| | Belgium | 25,969 | | | | 25,969 |
| | England..... | 221,871 | 288,077 | 632,432 | 153,519 | 1,295,899 |
| Total..... | | 2,090,741 | 4,787,901 | 1,636,145 | 254,012 | 8,768,799 |
| Egypt..... | Egypt..... | | | | 302,619 | 302,619 |
| | France..... | | | | 215,126 | 215,126 |
| Total..... | | | | | 517,745 | 517,745 |
| French Africa.... | France..... | | | | 58,323 | 58,323 |
| Total Africa..... | | 2,095,493 | 4,787,901 | 1,636,145 | 830,080 | 9,349,619 |
| NORTH AMERICA | | | | | | |
| Canada..... | Canada..... | 620,435 | 518,317 | 8,489 | 91,002 | 1,238,243 |
| Dutch West Indies..... | Dutch West Indies.. | | | | 11,714 | 11,714 |
| Total North America..... | | 620,435 | 518,317 | 8,489 | 102,716 | 1,249,957 |
| SOUTH AMERICA: | | | | | | |
| Argentina..... | Argentina..... | 6,002,098 | 13,930,624 | 2,862 | 12,354,133 | 32,289,717 |
| | Canada..... | 53,720 | | | | 53,720 |
| | Chile..... | | 864,614 | | | 864,614 |
| | England..... | 268,083 | 4,817 | 369,264 | | 642,164 |
| | Uruguay..... | | 169,711 | | | 169,711 |
| Total..... | | 6,323,901 | 14,969,766 | 372,126 | 12,354,133 | 34,019,926 |
| Bolivia..... | Chile..... | | 8,140 | | | 8,140 |
| Brazil..... | Brazil..... | 107,884 | | | | 107,884 |
| | Spain..... | 32,422 | | | | 32,422 |
| Total..... | | 140,306 | | | | 140,306 |
| Chile..... | Chile..... | 1,116,755 | 360,638 | 25,743 | 25,275 | 1,528,411 |
| | British India..... | | | | 33,329 | 33,329 |
| | Canada..... | 29,810 | | | | 29,810 |
| | England..... | 152,908 | | | | 152,908 |
| Total..... | | 1,299,473 | 360,638 | 25,743 | 58,604 | 1,744,458 |
| Falkland Islands | England..... | | | | 60,038 | 60,038 |
| Peru..... | Peru..... | 31,599 | 62,156 | 389,601 | | 483,356 |
| | England..... | 2,152 | | 205,440 | | 207,592 |
| Total..... | | 33,751 | 62,156 | 595,041 | | 690,948 |
| Uruguay..... | Uruguay..... | 8,376,306 | 14,426,845 | | 587,337 | 23,390,488 |
| | Argentina..... | | 92,783 | | | 92,783 |
| | Canada..... | 3,035 | | | | 3,035 |
| | England..... | | 73,127 | | | 73,127 |
| Total..... | | 8,379,341 | 14,592,755 | | 587,337 | 23,559,433 |
| Venezuela..... | Venezuela..... | | | | 676 | 676 |
| Total South America..... | | 16,176,772 | 29,993,455 | 992,910 | 13,060,788 | 60,223,925 |

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WOOL IMPORTED INTO THE UNITED STATES, ETC.—*Continued.*

| COUNTRIES OF PRODUCTION. | Countries of Immediate Shipment | Class I - Clothing. | Class II - | | Class III - Carpet. | TOTAL. |
|--------------------------|---------------------------------|---------------------|----------------|--|---------------------|----------------|
| | | | Comb- ing. | Hair of the An- gora Goat, Alpaca, etc. | | |
| | | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i> |
| AUSTRALASIA: | | | | | | |
| | Australia..... | 8,610,375 | 20,477,363 | ..... | 23,655 | 29,111,393 |
| | Belgium..... | 1,534 | ..... | ..... | ..... | 1,534 |
| | British So. Africa..... | ..... | 95 | ..... | ..... | 95 |
| | Canada..... | 14,613 | 22,490 | ..... | ..... | 37,103 |
| | England..... | 830,280 | 1,436,064 | 172 | 41,009 | 2,307,525 |
| | New Zealand..... | 65,203 | 587,164 | ..... | ..... | 652,367 |
| Total..... | | 9,522,005 | 22,523,176 | 172 | 64,664 | 32,110,017 |
| | New Zealand..... | 2,715,043 | 7,621,304 | ..... | ..... | 10,336,347 |
| | Canada..... | 5,315 | ..... | ..... | ..... | 5,315 |
| | England..... | 348,187 | 955,373 | ..... | ..... | 1,303,560 |
| Total..... | | 3,068,545 | 8,576,677 | ..... | ..... | 11,645,222 |
| Total Austrasia..... | | 12,590,550 | 31,099,853 | 172 | 64,664 | 43,755,236 |
| Grand Total..... | | 2,820,886 | 69,232,960 | 4,246,484 | 148,786,906 | 255,087,236 |

IMPORTS BY GRAND DIVISIONS, FISCAL YEAR ENDED JUNE 30, 1922.

| PLACES OF PRODUCTION. | Class I. | Class II. ^a | Mohair, Alpaca, etc. | Class III. | TOTAL. |
|-----------------------|------------|------------------------|----------------------------|-------------|-------------|
| Europe..... | 1,077,034 | 1,865,476 | 862,066 | 35,056,265 | 38,860,841 |
| Asia..... | 260,602 | 967,958 | 746,702 | 99,672,393 | 101,647,655 |
| Africa..... | 2,093,493 | 4,787,901 | 1,636,145 | 830,080 | 9,349,619 |
| North America..... | 620,435 | 518,317 | 8,489 | 102,716 | 1,249,957 |
| Central America..... | | | | | |
| South America..... | 16,176,772 | 29,993,455 | 992,910 | 13,060,788 | 60,223,925 |
| Australasia..... | 12,590,550 | 31,099,853 | 172 | 64,664 | 43,755,239 |
| Totals..... | 32,820,886 | 69,232,960 | 4,246,484 | 148,786,906 | 255,087,236 |

The corresponding figures for the preceding years are:

IMPORTS BY GRAND DIVISIONS, FISCAL YEAR ENDED JUNE 30, 1921.

| PLACES OF PRODUCTION. | Class I— Clothing. | Class II— Combing. | Mohair, Alpaca, etc. | Class III— Carpet. | TOTAL. |
|-----------------------|-----------------------|-----------------------|----------------------------|-----------------------|-------------|
| Europe..... | 3,004,368 | 2,471,973 | 923,576 | 15,165,546 | 21,565,463 |
| Asia..... | 9,793,651 | 1,773,393 | 1,307,734 | 23,927,184 | 36,801,962 |
| Africa..... | 23,448,664 | 187,876 | 682,971 | 1,819,251 | 26,138,762 |
| North America..... | 8,348,869 | 313,165 | | 87,571 | 8,749,605 |
| Central America..... | 6,929 | | | 17,821 | 24,750 |
| South America..... | 139,397,915 | 6,947,609 | 697,304 | 9,032,123 | 156,074,951 |
| Australasia..... | 67,561,486 | 1,302,894 | | 16,000 | 68,880,380 |
| Totals..... | 251,561,882 | 12,996,910 | 3,611,585 | 50,065,496 | 318,235,873 |

(a) Under the designation combing, or Class II wools, many wools are listed in the official statistics which do not fall within the definition of Class II wools contained in earlier tariff laws. The largely increased imports for the year 1922 are thus explained.

IMPORTS OF CLASS I WOOLS.

The imports of Class I wools were 32,820,886 pounds, or 218,820,886 pounds less than those of the fiscal year 1921, which were 251,554,981 pounds. This decrease shows the effect of the Emergency Tariff law on imports of that class. The following table covers the last four years and shows the amount of such wools coming into this country from each of the principal countries of production:

IMPORTS OF CLASS I WOOLS.

| | 1922. | 1921. | 1920. | 1919. |
|---------------------------|------------|-------------|-------------|-------------|
| | Pounds. | Pounds. | Pounds. | Pounds. |
| Australasia..... | 12,590,550 | 67,561,486 | 75,618,624 | 92,991,382 |
| Argentina..... | 6,323,901 | 91,875,734 | 129,770,054 | 121,519,497 |
| Uruguay..... | 8,379,341 | 32,882,635 | 45,310,997 | 34,386,870 |
| British South Africa..... | 2,090,741 | 23,293,726 | 41,463,603 | 47,967,223 |
| All other..... | 3,436,353 | 35,941,400 | 45,048,831 | 18,770,873 |
| | 32,820,886 | 251,554,981 | 337,212,109 | 315,635,845 |

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IMPORTS OF COMBING OR CLASS II WOOLS. ^a

In the fiscal year 1922, 69,037,942 pounds of Combing, Class II wools, not including mohair, alpaca, etc., were imported. The countries from which the chief imports came are shown by the following table:

IMPORTS OF COMBING OR CLASS II WOOLS, FISCAL YEAR 1922

| | <i>Pounds.</i> | | <i>Pounds.</i> |
|---------------------|----------------|--------------------------|----------------|
| Australia..... | 22,523,176 | Argentina..... | 14,969,766 |
| Chile..... | 360,638 | New Zealand..... | 8,576,677 |
| China..... | 687,746 | British South Africa.... | 4,787,901 |
| United Kingdom..... | 1,833,321 | Uruguay..... | 14,592,755 |
| Canada..... | 518,317 | Turkey in Asia..... | 187,645 |
| | | Total..... | 69,037,942 |

(a) The official figures now include under the term Combing or Class II wools many which are not within the definition of Class II wools contained in earlier tariff laws.

Imports of Mohair, Alpaca, etc.

The imports of mohair in the fiscal year 1922 were 4,246,484 pounds or 634,899 pounds more than those for the preceding fiscal year, the imports from Turkey in Europe rising from 473,981 pounds in 1921 to 702,091 pounds in 1922, and the total from Europe falling from 923,576 pounds in 1921 to 862,066 pounds in 1922. Germany appeared as the grower and exporter of 7,436 pounds of mohair. China's exports increased from 183,651 pounds in 1921 to 340,114 pounds in 1922. Turkey in Asia sent 306,483 pounds, while British South Africa furnished 1,636,145 pounds, compared with 682,971 pounds in 1921, 2,270,428 pounds in 1920 and 6,364,111 pounds in 1919. The imports from South America were comparatively small, Peru still remaining the heaviest shipper, sending 595,041 pounds in 1922, compared with 517,601 pounds in 1921 and 1,808,647 pounds in the year 1920.

IMPORTS OF CLASS III, OR CARPET WOOLS.

These wools come from nearly every portion of the globe, but principally from the countries in the subjoined table, which covers the imports of the last three fiscal years. In other years these wools were mostly imported for the manufacture of carpets, but in 1922, owing to the extremely high duties imposed upon other classes of wool, large quantities of the better grades of these wools, all admitted free of duty under the Emergency Tariff law, were imported for use in the making of certain fabrics for which they are adapted. The imports of these wools were 148,786,906 pounds or 98,721,390 pounds larger than in the preceding fiscal year. France sent 1,917,172 pounds; Germany, 1,975,720 pounds; United Kingdom, 20,886,527 pounds, of which 18,607,026 came from Scotland; Europe, 35,056,265 pounds; India, 29,272,345 pounds, and China, 67,285,445 pounds, the total from Asia reaching 99,672,393 pounds. South America sent 13,060,788 pounds and Australasia, 64,664 pounds.

| | 1922. | 1921. | 1920. |
|------------------------------|----------------|----------------|----------------|
| | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i> |
| Chinese Empire..... | 67,285,445 | 15,210,932 | 24,033,447 |
| Russia (Europe and Asia).... | 1,181,635 | 941,694 | 3,823,982 |
| United Kingdom..... | 20,886,527 | 11,901,735 | 7,958,336 |
| Turkey (Europe and Asia).... | 1,591,963 | 1,734,195 | 8,797,401 |
| British East Indies..... | 29,272,345 | 5,967,697 | 8,084,585 |
| France..... | 1,917,172 | 357,009 | 90,155 |
| Spain..... | 381,049 | 311,483 | 1,094,887 |
| Iceland..... | 1,287,104 | 114,878 | 426,875 |
| British South Africa..... | 254,012 | 1,768,206 | 1,692,611 |
| Argentina..... | 12,354,133 | 5,998,943 | 7,107,578 |
| Uruguay..... | 587,337 | 2,536,672 | 1,169,084 |
| Peru..... | ..... | 158,101 | 781,844 |
| Chile..... | 58,604 | 254,424 | 4,526,602 |
| Ecuador..... | ..... | 8,210 | 346,934 |
| Germany..... | 1,975,720 | ..... | ..... |
| Portugal..... | 1,327,558 | ..... | ..... |
| Switzerland..... | 54,615 | ..... | ..... |
| Ukraine..... | 162,059 | ..... | ..... |
| Far Eastern Republic..... | 383,904 | ..... | ..... |
| Persia..... | 158,779 | ..... | ..... |
| All others..... | 7,666,945 | 2,801,337 | 2,291,427 |
| | 148,786,906 | 50,065,516 | 72,225,748 |

The following table gives the total gross imports into the United States for sixteen fiscal years:

GROSS IMPORTS OF WOOL, FISCAL YEARS 1907-1922—POUNDS.

| Fiscal Years. | Class I. | Class II.* | Class III. | Total. |
|---------------|-------------|-------------|-------------|-------------|
| 1907..... | 82,982,116 | 10,671,378 | 110,194,051 | 203,847,545 |
| 1908..... | 45,798,313 | 13,332,540 | 66,849,681 | 125,980,524 |
| 1909..... | 142,580,993 | 21,952,259 | 101,876,052 | 266,409,304 |
| 1910..... | 111,604,330 | 31,614,235 | 120,721,019 | 263,939,584 |
| 1911..... | 40,104,845 | 12,456,468 | 85,086,328 | 137,647,641 |
| 1912..... | 71,203,329 | 15,557,664 | 106,639,720 | 193,400,713 |
| 1913..... | 67,238,715 | 16,886,446 | 111,168,094 | 195,293,255 |
| 1914..... | 125,088,761 | 20,556,795 | 102,003,313 | 247,648,869 |
| 1915..... | 222,017,420 | 20,356,212 | 65,709,752 | 308,083,429 |
| 1916..... | 403,121,585 | 22,437,438 | 109,268,999 | 534,828,022 |
| 1917..... | 279,481,501 | 25,218,046 | 67,672,671 | 372,372,218 |
| 1918..... | 303,868,940 | 16,266,332 | 58,994,662 | 379,129,934 |
| 1919..... | 327,944,887 | 10,291,643 | 84,178,455 | 422,414,985 |
| 1920..... | 337,212,109 | 18,140,181 | 72,225,748 | 427,578,038 |
| 1921..... | 251,561,882 | 16,608,495 | 50,065,496 | 318,235,873 |
| 1922..... | 32,820,886 | 148,786,906 | 148,786,906 | 255,087,236 |

*Includes mohair, etc.

(a) This total includes wools not covered by the designation, Class II wools, under the terms of earlier tariff laws.

The imports of wool by classes for the four months of July, August, September, and October, 1922 compared with the imports for the corresponding months of 1921, and the totals of corresponding months for the four previous years are shown in the following tables:

IMPORTS OF WOOL FOR JULY, AUGUST, SEPTEMBER,
AND OCTOBER, 1922 AND 1921.

| | Class I. Clothing. | Class II. Combing. ^a | Mohair, etc. | Class III. Carpet. | Total. |
|------------------|-----------------------|------------------------------------|-----------------|-----------------------|----------------|
| | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i> |
| July, 1922 | 2,199,843 | 13,371,920 | 1,405,906 | 33,484,269 | 50,461,938 |
| August, " | 2,398,763 | 19,063,316 | 877,900 | 34,472,469 | 56,812,448 |
| September, (1) " | 3,349,632 | 8,804,978 | 567,562 | 27,891,522 | 40,613,694 |
| October, (2) " | 1,676,769 | 6,244,553 | 721,383 | 16,125,951 | 24,768,656 |
| Total..... | 9,625,007 | 47,484,767 | 3,572,751 | 111,974,211 | 172,656,736 |

- (a) Under the designation combing, or Class II wools, many wools are listed in the official statistics which do not fall within the definition of Class II wools contained in earlier tariff laws. The largely increased imports for the year 1922 are thus explained.
- (1) Includes imports only up to September 22, 1922, when the new tariff law became effective.
- (2) Includes imports from September 22 to October 31, 1922, inclusive.

| | Class I. Clothing. | Class II. Combing. | Mohair, etc. | Class III. Carpet. | Total. |
|--------------|-----------------------|-----------------------|-----------------|-----------------------|----------------|
| | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i> |
| July, 1921 | 656,111 | 80,008 | | 8,660,745 | 9,396,864 |
| August, " | 3,947,376 | | 75,059 | 11,844,309 | 15,866,744 |
| September, " | 293,857 | 24,114 | 139,108 | 14,135,380 | 14,592,459 |
| October, " | 585,369 | | 606,647 | 7,893,690 | 9,085,706 |
| Total..... | 5,482,713 | 104,122 | 820,814 | 42,534,124 | 48,941,773 |

For the corresponding four months of the four preceding years the imports were:

| | Class I. Clothing. | Class II*. Combing. | Class III. Carpet. | Total. |
|-----------|-----------------------|------------------------|-----------------------|----------------|
| | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i> |
| 1918..... | 109,837,410 | 2,401,527 | 28,821,618 | 141,208,359 |
| 1919..... | 139,557,785 | 6,083,813 | 34,312,553 | 180,755,779 |
| 1920..... | 34,409,541 | 2,532,999 | 7,399,806 | 44,335,246 |
| 1921..... | 5,482,713 | 924,936 | 42,534,124 | 48,941,773 |

*Including mohair, alpaca, etc.

IMPORTS OF WOOL MANUFACTURES.

The gross imports of wool manufactures for the fiscal year 1922 show a foreign value of \$43,332,710 which is \$17,899,848 less than the value of similar imports for the fiscal year 1921, which were \$17,695,106 more than in 1920. The value for 1922 is almost identical with the value for 1920. Like the imports of wool, the imports of wool manufactures were affected by the higher rates of duty imposed by the Emergency Tariff law. The values are foreign and can not properly be compared with the value of home manufactures unless the customs duties levied are added.

The value of exports of wool manufactures continued to decline. In the fiscal year 1918, they were \$17,749,821, rising in 1919 to \$31,191,387 and in 1920 to \$56,223,360, from which high point they declined in 1921 to \$21,576,187, in 1922 taking a rapid descent to a meager \$7,036,702. In the fiscal year 1922, their value was \$24,154,685 less than three years earlier and \$49,186,658 less than in 1920. At the present rate of decrease they will be comparatively insignificant in a few years, if they do not entirely disappear.

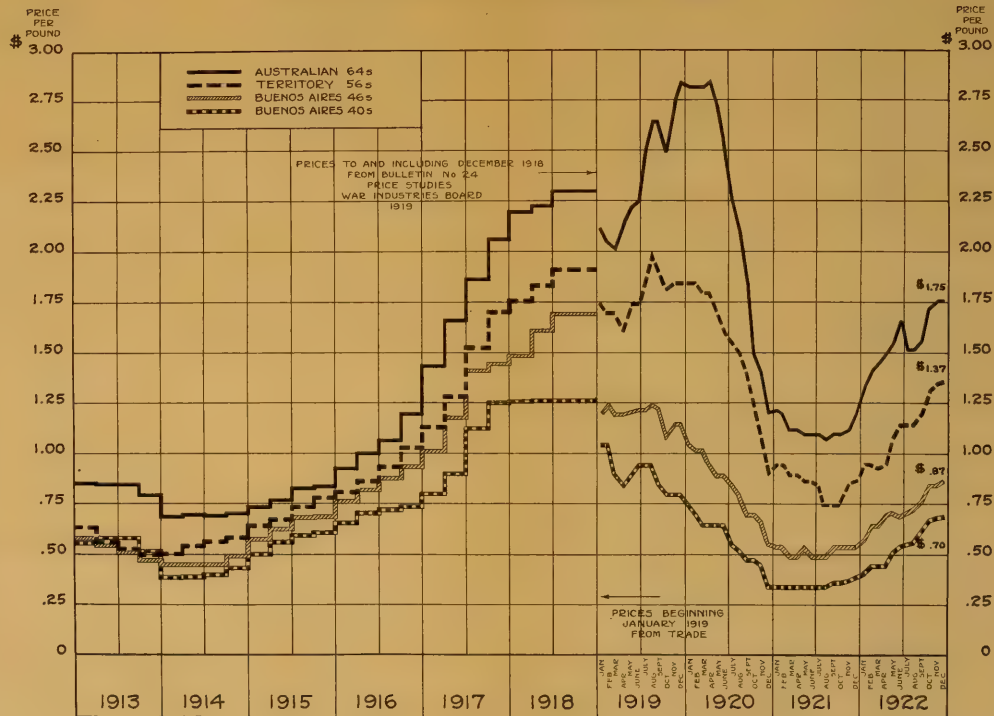
The Government no longer issues a table of imports for consumption for the fiscal year, only one for the calendar year being published, and in consequence that feature of the Review must be dropped temporarily.

IMPORTS OF PRINCIPAL WOOL MANUFACTURES, FISCAL YEARS 1916-1922. (FOREIGN VALUE.)

| GROSS IMPORTS, YEARS ENDED JUNE 30. | 1922. | | 1921. | | 1920. | | 1919. | | 1918. | | 1917. | | 1916. | |
|---|----------------|-------------|----------------|-------------|----------------|-------------|----------------|------------|----------------|-------------|----------------|-------------|----------------|-------------|
| | Quan- tity. | Value. | Quan- tity. | Value. | Quan- tity. | Value. | Quan- tity. | Value. | Quan- tity. | Value. | Quan- tity. | Value. | Quan- tity. | Value. |
| Carpets and rugs, wo- ven whole (sq. yds.) | 1,281,894 | \$7,355,363 | 854,844 | \$7,252,952 | 840,808 | \$7,203,097 | 165,996 | \$962,297 | 473,604 | \$2,247,128 | 659,807 | \$3,024,610 | 733,458 | \$2,371,351 |
| All other (sq. yds.) | 608,852 | 2,250,476 | 537,965 | 2,137,071 | 258,324 | 962,091 | 78,286 | 303,468 | 166,687 | 614,304 | 297,101 | 767,232 | ..... | ..... |
| Wearing Apparel | ..... | 8,103,457 | ..... | 8,282,040 | ..... | 4,313,627 | ..... | 4,421,969 | ..... | 8,832,296 | ..... | 1,708,794 | ..... | 1,127,536 |
| Cloth, pounds | 6,160,891 | 11,282,460 | 5,427,114 | 10,182,120 | 5,095,132 | 12,858,518 | 1,561,993 | 3,498,168 | 2,630,882 | 4,619,498 | 6,055,032 | 7,494,082 | 6,117,908 | 6,479,063 |
| " square yards | 9,364,387 | ..... | 7,889,819 | 7,727,579 | 7,727,579 | ..... | 2,322,846 | ..... | 3,864,145 | ..... | 8,212,495 | ..... | 8,880,828 | ..... |
| Dress goods, pounds | 641,275 | 1,305,900 | 1,647,512 | 4,270,036 | 1,064,387 | 2,790,371 | 325,896 | 770,973 | 572,305 | 987,825 | 3,329,425 | 1,183,472 | 1,691,259 | 1,805,880 |
| " " sq. yds. | 2,372,298 | ..... | 5,507,553 | ..... | 3,403,694 | ..... | 1,261,365 | ..... | 2,378,719 | ..... | 826,122 | ..... | 6,914,313 | ..... |
| Manufactures of mo- hair, etc. | 381,274 | 793,462 | 470,487 | 1,182,688 | 366,168 | 839,634 | 191,230 | 381,406 | ..... | 944,704 | ..... | 1,885,216 | ..... | 1,673,029 |
| Tops | 1,111,306 | 928,695 | 15,467,048 | 10,566,627 | 1,408,462 | 1,800,491 | 22,588 | 26,655 | ..... | 101,422 | 5,853 | 5,913 | 483,183 | 251,812 |
| Yarns | 3,906,724 | 4,361,828 | 5,639,079 | 8,893,360 | 2,092,251 | 4,488,058 | 507,767 | 972,858 | 489,007 | 1,165,895 | 38,374 | 55,406 | 110,477 | 88,086 |
| Rags, noils and wastes | 23,763,168 | 4,927,354 | 8,401,394 | 3,661,617 | 8,152,545 | 6,120,540 | ..... | 1,233,422 | ..... | 1,302,843 | ..... | 1,668,333 | ..... | 1,207,517 |
| All other | ..... | 2,023,715 | ..... | 2,775,176 | ..... | 2,122,077 | ..... | 708,265 | ..... | 6,680,883 | ..... | 1,069,405 | ..... | 653,263 |
| Total | ..... | 43,332,710 | ..... | 59,203,687 | ..... | 43,498,504 | ..... | 13,279,481 | ..... | 27,476,798 | ..... | 18,862,463 | ..... | 15,657,537 |

TOPS - PRICES

NATIONAL ASSOCIATION OF WOOL MANUFACTURERS



PRICES FOR TOPS.

The average monthly prices for tops of all grades throughout the past year showed a steady tendency to rise except during the months of July and August, during which there was a temporary set-back. In September the forward march was resumed, and continued rapidly to the end of the year, when the price for Australian 64's was 42 cents higher than in January. The same is true of the other grades given in the table, the increase for Territory 56's being 42 cents; for South American 46's and 40's, 29 and 28 cents, respectively. The figures have been prepared by Francis Willey and Company, the well known wool merchants and top makers.

MONTHLY AVERAGE PRICES FOR TOPS, YEAR 1922.

| | Australian 64's. | Territory 56's. | S. A. 46's. | S. A. 40's. |
|----------------|---------------------|--------------------|----------------|----------------|
| | <i>Dollars.</i> | <i>Cents.</i> | <i>Cents.</i> | <i>Cents.</i> |
| January..... | 1.33 | 95 | 58 | 42 |
| February..... | 1.42 | 95 | 65 | 45 |
| March..... | 1.45 | 93 | 65 | 45 |
| April..... | 1.50 | 95 | 70 | 45 |
| May..... | 1.55 | 1.08 | 72 | 52 |
| June..... | 1.66 | 1.15 | 70 | 55 |
| July..... | 1.52 | 1.15 | 72 | 57 |
| August..... | 1.52 | 1.15 | 73 | 57 |
| September..... | 1.57 | 1.20 | 77 | 62 |
| October..... | 1.72 | 1.32 | 85 | 68 |
| November..... | 1.75 | 1.35 | 85 | 69 |
| December..... | 1.75 | 1.37 | 87 | 70 |

WORSTED WEAVING YARNS.

The chart showing prices during 1922 for worsted weaving yarns shows a large increase per pound for all the yarns included in the table. For 2/24's, quarter blood, the price on January 1, 1921 was \$1.10 a pound, but by December 1, 1921 it had fallen to \$1.05. On the contrary, one month later, the price was \$1.15 and by the first of December, 1922, the various increases registered during the intervening months carried it to \$1.60 per pound. For 2/36's, 3/8's blood, yarns, the price which was \$1.40, on January 1, 1922, was twenty cents less than it was a year earlier; but on the first of December, 1922, it was seventy cents higher than on January 1, and 72½ cents higher than on December 1, 1921. The price, \$1.85 for ½ blood, 2/40's, which was the same on January 1, 1921 as on January 1, 1922, was \$1.65 on December 1, 1921 and \$2.45 on December 1, 1922. A similar increase was registered for fine medium 2/50's, which rose from \$2.10 on January 1, 1922 to \$2.75 on December 1922, while the de-

crease between January 1, 1921 and December 1, 1921 was from \$2.15 to \$1.90.

The following table gives the prices on the first day of each month, not the average price for the month, for the four kinds of yarns and also on the first of January 1923.

YARN PRICES—1921 AND 1922.
(Furnished by Mr. N. B. Kneass Brooks.)

| | 2/24's. $\frac{1}{4}$ Blood. Domestic. | | 2/36's. $\frac{3}{8}$ Blood. | | 2/40's. $\frac{1}{2}$ Blood. | | 2/50's. Fine Medium. | |
|------------------|--|--------------------|---------------------------------|--------------------|---------------------------------|-------|-------------------------|-------|
| | 1921. | 1922. | 1921. | 1922. | 1921. | 1922. | 1921. | 1922. |
| | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| January 1..... | 1.10 | 1.15 | 1.60 | 1.40 | 1.85 | 1.85 | 2.15 | 2.10 |
| February 1..... | 1.12 $\frac{1}{2}$ | 1.20 | 1.65 | 1.47 $\frac{1}{2}$ | 1.80 | 1.95 | 2.20 | 2.30 |
| March 1..... | 1.17 $\frac{1}{2}$ | 1.30 | 1.52 $\frac{1}{2}$ | 1.60 | 1.85 | 2.00 | 2.20 | 2.35 |
| April 1..... | 1.20 | 1.25 | 1.50 | 1.55 | 1.80 | 1.95 | 2.15 | 2.30 |
| May 1..... | 1.00 | 1.35 | 1.45 | 1.65 | 1.75 | 2.10 | 2.05 | 2.50 |
| June 1..... | 1.00 | 1.45 | 1.40 | 1.75 | 1.75 | 2.20 | 2.00 | 2.75 |
| July 1..... | .90 | 1.45 | 1.40 | 1.85 | 1.75 | 2.25 | 2.00 | 2.75 |
| August 1..... | .90 | 1.42 $\frac{1}{2}$ | 1.35 | 1.80 | 1.75 | 2.20 | 2.00 | 2.60 |
| September 1..... | .95 | 1.45 | 1.35 | 1.85 | 1.70 | 2.20 | 1.95 | 2.60 |
| October 1..... | 1.00 | 1.45 | 1.35 | 1.85 | 1.65 | 2.20 | 1.85 | 2.60 |
| November 1..... | 1.00 | 1.55 | 1.32 $\frac{1}{2}$ | 2.07 $\frac{1}{2}$ | 1.65 | 2.45 | 1.85 | 2.75 |
| December 1..... | 1.05 | 1.60 | 1.37 $\frac{1}{2}$ | 2.10 | 1.65 | 2.45 | 1.90 | 2.75 |
| 1923. | | | | | | | | |
| January 1..... | | 1.60 | | 2.10 | | 2.45 | | 2.75 |

The following table shows the imports of mutton and lamb into the United States by months for the ten months ended October 31, 1921 and 1922:

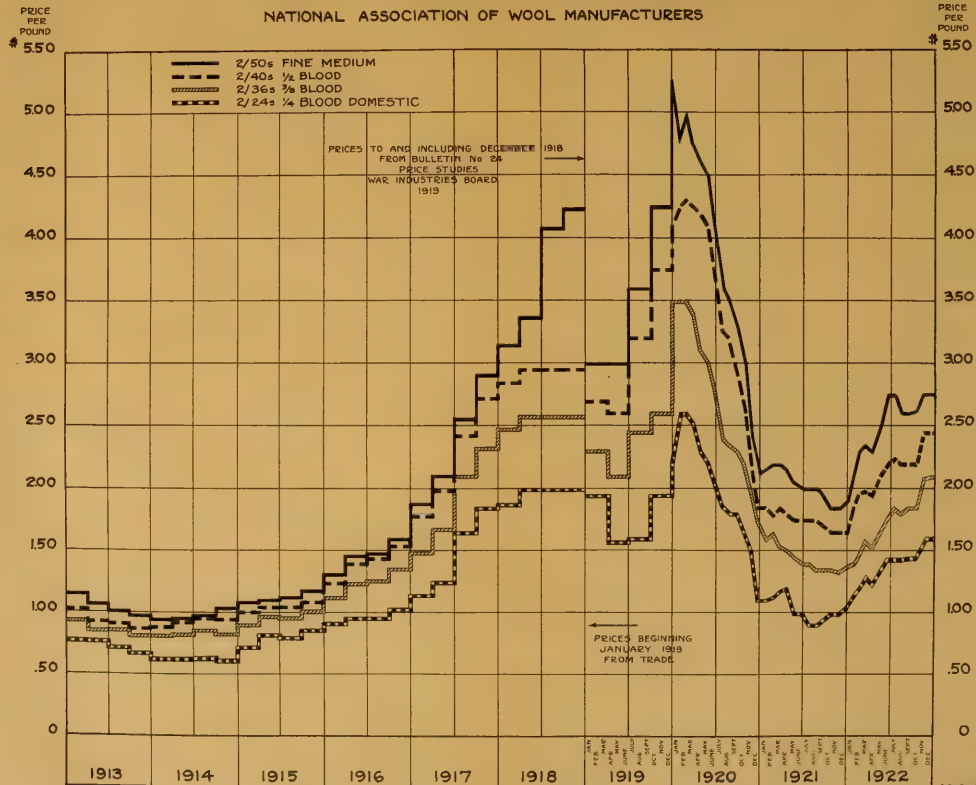
IMPORTS OF MUTTON AND LAMB INTO THE UNITED STATES BY MONTHS—
TEN MONTHS ENDED OCTOBER 31, 1921 AND 1922.

| | 1921. | | 1922. | |
|----------------|------------|-------------|------------|-------------|
| | Quantity. | Value. | Quantity. | Value. |
| | Pounds. | Dollars. | Pounds. | Dollars. |
| January..... | 13,864,205 | 1,304,914 | 568,767 | 103,191 |
| February..... | 4,980,140 | 594,741 | 901,824 | 129,871 |
| March..... | 415,955 | 50,533 | 940,665 | 114,008 |
| April..... | 53,380 | 10,311 | 1,280,228 | 203,439 |
| May..... | 47,387 | 7,023 | 1,496,529 | 261,470 |
| June..... | 103,826 | 12,792 | 1,736,867 | 222,314 |
| July..... | 113,801 | 20,679 | 416,659 | 49,958 |
| August..... | 617,243 | 113,946 | 813,921 | 156,222 |
| September..... | 1,237,402 | 207,633 | 1,280,698 | 294,778 |
| October..... | 1,301,338 | 212,397 | 1,446,377 | 350,170 |
| Total..... | 22,734,677 | \$2,534,969 | 10,882,535 | \$1,885,421 |

Note: From May 28, 1921, to October 31, 1921, 3,324,580 pounds of mutton and lamb valued at \$560,403 were dutiable.

WORSTED WEAVING YARNS - PRICES

NATIONAL ASSOCIATION OF WOOL MANUFACTURERS



IMPORTS OF MUTTON AND LAMB, FISCAL YEARS 1914-1922, INCLUSIVE.

| Year. | Quantity. | Value. |
|-----------|-------------------------|-----------------|
| | <i>Pounds.</i> | <i>Dollars.</i> |
| 1914..... | ¹ 12,690,920 | 1,112,294 |
| | ² 19,985 | 2,436 |
| 1915..... | 15,528,855 | 1,474,422 |
| 1916..... | 20,257,999 | 1,784,310 |
| 1917..... | 4,684,131 | 555,646 |
| 1918..... | 2,007,601 | 267,948 |
| 1919..... | 4,542,317 | 938,628 |
| 1920..... | 16,358,299 | 2,519,355 |
| 1921..... | 108,473,368 | 12,837,808 |
| | ³ 54,846 | 5,763 |
| 1922..... | 12,854,925 | 2,044,585 |

¹ Beginning October 4, 1913.² July 1 to October 3, 1913.³ Dutiable beginning May 28, 1921.

EXPORTS BY MONTHS OF MUTTON AND LAMB, TEN MONTHS, CALENDAR YEARS 1921 AND 1922.

| | 1921. | | 1922. | |
|----------------|----------------|-----------------|----------------|-----------------|
| | Quantity | Value | Quantity | Value |
| | <i>Pounds.</i> | <i>Dollars.</i> | <i>Pounds.</i> | <i>Dollars.</i> |
| January..... | 195,089 | 35,764 | 562,624 | 102,384 |
| February..... | 111,641 | 21,186 | 371,574 | 63,307 |
| March..... | 81,369 | 18,325 | 430,679 | 76,494 |
| April..... | 88,674 | 20,218 | 1,959,709 | 346,773 |
| May..... | 302,816 | 66,218 | 996,186 | 171,108 |
| June..... | 229,796 | 46,902 | 1,701,838 | 278,611 |
| July..... | 203,095 | 38,112 | 395,378 | 56,177 |
| August..... | 168,464 | 31,244 | 410,765 | 58,421 |
| September..... | 100,446 | 18,110 | 264,446 | 40,011 |
| October..... | 52,055 | 10,284 | 99,597 | 15,191 |
| Total..... | 1,533,445 | 306,363 | 7,192,796 | 1,208,477 |

EXPORTS OF MUTTON AND LAMB. FISCAL YEARS 1914-1922, INCLUSIVE.

| | Quantity. | Value. | | Quantity. | Value. |
|-----------|----------------|-----------------|-----------|----------------|-----------------|
| | <i>Pounds.</i> | <i>Dollars.</i> | | <i>Pounds.</i> | <i>Dollars.</i> |
| 1914..... | 4,685,496 | 523,023 | 1918..... | 2,098,423 | 453,232 |
| 1915..... | 3,877,413 | 448,221 | 1919..... | 2,173,994 | 511,065 |
| 1916..... | 5,552,918 | 696,882 | 1920..... | 3,958,131 | 815,452 |
| 1917..... | 3,195,576 | 481,526 | 1921..... | 7,254,522* | 1,291,325 |
| | | | 1922..... | 2,502,213 | 424,917 |

*Revised figures.

The following table shows the countries to which our domestic wools were exported during the fiscal year ended June 30, 1922, both the quantities and values being given. The total exports last year were 5,583,669 pounds, valued at \$2,259,296. Last year the exports were largely due to the low prices which prevailed in this country, and some of the wool exported was intended no doubt to be manufactured abroad and to be reshipped to this country. Nearly all these disappeared during the fiscal year 1922. It is interesting to note that while our imports of wool from Canada in the fiscal year 1922 were 1,238,243 pounds, our exports to Canada in the same period were 585,090 pounds. We sent Mexico in the fiscal year 304,276 pounds, and imported no wool at all from that country. This emphasizes the undoubtedly heavy losses which the flocks of Mexico suffered during the insurrection in that country.

EXPORTS OF DOMESTIC WOOL, BY COUNTRIES, FISCAL YEAR ENDED
JUNE 30, 1922.

| Countries. | Quantity. | Value. |
|--------------------------------|----------------|-----------------|
| | <i>Pounds.</i> | <i>Dollars.</i> |
| Germany..... | 341 | 75 |
| England..... | 27,072 | 3,509 |
| Mexico..... | 304,276 | 50,454 |
| Canada..... | 585,090 | 141,439 |
| Newfoundland and Labrador..... | 330 | 300 |
| Venezuela..... | 1,186 | 700 |
| British India..... | 200 | 50 |
| Cuba..... | 1,546 | 2,493 |
| Total..... | 920,041 | \$199,020 |

Owing to peculiar conditions growing out of the war, domestic wools were exported in small quantities for the past five fiscal years, the quantity for 1921 reaching the total of 5,583,669 pounds. This was 1,307,000 pounds less than the high mark of 1920. The greatly diminished quantity exported during the fiscal year 1922, shows that the domestic wool grower can not hope to export his clip to foreign markets. The best and almost the sole customers for the wools of the United States are our domestic manufacturers, whose machin-

ery consumes year in and year out all but the smallest proportion of the domestic clip. The following table shows the exports of domestic wool for the past six fiscal years:

EXPORTS OF DOMESTIC WOOL, FISCAL YEARS 1917 TO 1922, INCLUSIVE.

| Year. | Quantity. | Value. |
|-----------|----------------|-----------------|
| | <i>Pounds.</i> | <i>Dollars.</i> |
| 1917..... | 2,148,350 | 1,230,296 |
| 1918..... | 993,143 | 916,506 |
| 1919..... | 545,663 | 550,764 |
| 1920..... | 6,890,669 | 4,658,909 |
| 1921..... | 5,583,669 | 2,259,296 |
| 1922..... | 923,924 | 201,499 |

The following table shows the imports of rags, noils, and wastes into the country and cumulative quantity and value by months for the ten months of the year.

IMPORTS OF RAGS, NOILS, AND WASTES INTO THE UNITED STATES BY MONTHS, TEN MONTHS ENDED OCTOBER 31, 1922.

| Month. | Quantity. | Value. | Value per Pound. | Cumulative Quantity. | Cumulative Value. | Cumulative Value per Pound. | Cumulative Value per Pound. 1921. | Cumulative Value per Pound. 1920 |
|----------------------------|----------------|-----------------|------------------|----------------------|-------------------|-----------------------------|-----------------------------------|----------------------------------|
| 1922 | <i>Pounds.</i> | <i>Dollars.</i> | <i>Cents.</i> | <i>Pounds.</i> | <i>Dollars.</i> | <i>Cents.</i> | <i>Cents.</i> | <i>Cents.</i> |
| January..... | 1,046,903 | 176,969 | 16.9 | 1,046,903 | 176,969 | 16.9 | 34.3 | 68.5 |
| February..... | 1,989,295 | 379,637 | 19.1 | 3,036,198 | 556,606 | 18.3 | 39.3 | 81.5 |
| March..... | 4,547,981 | 938,473 | 20.6 | 7,584,179 | 1,495,079 | 19.7 | 36.8 | 72.5 |
| April..... | 2,274,092 | 601,859 | 26.5 | 9,858,271 | 2,096,938 | 21.3 | 40.8 | 69.1 |
| May..... | 3,182,904 | 721,494 | 22.7 | 13,041,175 | 2,818,432 | 21.6 | 41.5 | 67.0 |
| June..... | 7,249,156 | 1,257,694 | 17.3 | 20,290,331 | 4,076,126 | 20.1 | 41.2 | 63.7 |
| July..... | 9,017,267 | 1,486,476 | 16.5 | 29,307,598 | 5,562,602 | 19.0 | 42.3 | 62.6 |
| August..... | 7,266,767 | 1,473,078 | 20.3 | 36,574,365 | 7,035,680 | 19.2 | 41.6 | 61.7 |
| September ¹ ... | 6,236,649 | 1,293,620 | 20.7 | 42,811,014 | 8,329,300 | 19.5 | 41.6 | 61.1 |
| October..... | 4,346,727 | 1,514,360 | 34.8 | 47,157,741 | 9,843,660 | 20.9 | 40.6 | 60.4 |
| Total..... | 47,157,741 | 9,843,660 | 20.9 | 47,157,741 | 9,843,660 | 20.9 | 40.6 | 60.4 |

¹ After September 21, the imports were subject to the duties of the new tariff law;

IMPORTS OF RAGS, NOILS, AND WASTES INTO THE UNITED STATES BY
MONTHS, FISCAL YEAR ENDED JUNE 30, 1922 AND CUMULATIVE
VALUES PER POUND FOR FISCAL YEARS 1920, 1921, AND 1922.

| Fiscal Year July 1 to June 30 1921-1922. | Quantity | Value. | Value per Pound. | Cumula- tive Quantity. | Cumula- tive Value. | Cumu- lative Value per Pound. | Cumula- tive Value per Pound, 1921. | Cumula- tive Value per Pound, 1920. |
|--|----------------|-----------------|------------------------|------------------------------|---------------------------|---|---|---|
| | <i>Pounds.</i> | <i>Dollars.</i> | <i>Cents.</i> | <i>Pounds.</i> | <i>Dollars.</i> | <i>Cents.</i> | <i>Cents.</i> | <i>Cents.</i> |
| July..... | 111,429 | 121,689 | 1.092* | 111,429 | 121,689 | 1.092 | 43.1 | 91.2 |
| August..... | 293,513 | 69,664 | 23.7 | 404,942 | 191,353 | 47.3 | 52.0 | 86.0 |
| September..... | 430,357 | 178,682 | 41.5 | 835,299 | 370,035 | 44.3 | 50.1 | 90.7 |
| October..... | 464,982 | 116,235 | 25.0 | 1,300,281 | 486,270 | 37.4 | 48.9 | 96.1 |
| November..... | 953,022 | 169,736 | 17.8 | 2,253,303 | 656,006 | 29.1 | 50.6 | 98.9 |
| December..... | 1,219,534 | 195,222 | 16.0 | 3,472,837 | 851,228 | 24.5 | 51.9 | 93.0 |
| January..... | 1,046,903 | 176,969 | 16.9 | 4,519,740 | 1,028,197 | 22.7 | 48.7 | 88.7 |
| February..... | 1,989,295 | 379,637 | 19.1 | 6,509,035 | 1,407,834 | 21.6 | 46.0 | 89.4 |
| March..... | 4,547,981 | 938,473 | 20.6 | 11,057,016 | 2,346,307 | 21.2 | 41.7 | 83.0 |
| April..... | 2,274,092 | 601,859 | 26.5 | 13,331,108 | 2,948,166 | 22.1 | 43.6 | 79.9 |
| May..... | 3,182,904 | 721,494 | 22.7 | 16,514,012 | 3,669,660 | 22.2 | 43.8 | 77.5 |
| June..... | 7,249,156 | 1,257,694 | 17.3 | 23,763,168 | 4,927,354 | 20.7 | 43.6 | 75.0 |
| Total..... | 23,763,168 | 4,927,354 | | 23,763,168 | 4,927,354 | 20.7 | 43.6 | 75.0 |

*This very high price was due to the large quantity of noils and wastes and the small quantity of rags imported during July. In all the other months, large quantities of rags were imported before the duty was imposed by the new tariff law, greatly reducing the prices for the total quantity of noils, wastes, and rags imported.

The following table shows the exports of woolen rags from the United States for the fiscal years ended June 30, 1914 to 1922, inclusive. Total quantities, total values, and values per pound are given, those for the years 1919, 1920, and 1921 showing the effect of the higher prices caused by the war for all commodities. The price for 1922 is nearly a cent less than for 1916.

EXPORTS OF WOOLEN RAGS FROM THE UNITED STATES FOR THE FISCAL
YEARS ENDED JUNE 30, 1914 TO 1922, INCLUSIVE, QUANTITY AND VALUE.

| Year. | Quantity. | Total Value. | Value per Pound. |
|-----------|----------------|-----------------|---------------------|
| | <i>Pounds.</i> | <i>Dollars.</i> | <i>Cents.</i> |
| 1914..... | 26,852,402 | 973,653 | 3.6 |
| 1915..... | 24,784,622 | 1,388,934 | 5.6 |
| 1916..... | 13,918,247 | 1,283,281 | 9.2 |
| 1917..... | 13,671,472 | 1,629,130 | 11.9 |
| 1918..... | 8,532,243 | 1,012,350 | 11.8 |
| 1919..... | 21,121,145 | 3,653,874 | 17.2 |
| 1920..... | 21,020,362 | 3,959,543 | 18.8 |
| 1921..... | 6,147,741 | 949,499 | 15.4 |
| 1922..... | 3,815,121 | 317,390 | 8.3 |

EXPORTS OF WOOL WEARING APPAREL FROM THE UNITED STATES,
FISCAL YEARS, 1915 TO 1922, INCLUSIVE.

| Year | Value. | Year. | Value. |
|-----------|-------------|-----------|-------------|
| 1915..... | \$9,108,900 | 1919..... | \$8,615,529 |
| 1916..... | 19,368,501 | 1920..... | 14,093,665 |
| 1917..... | 4,452,258 | 1921..... | 4,555,463 |
| 1918..... | 3,301,525 | 1922..... | 2,589,276 |

The table showing the exports of wool wearing apparel for the calendar years 1913-1922, inclusive, is as follows.

EXPORTS OF WOOL WEARING APPAREL FROM THE UNITED STATES,
CALENDAR YEARS 1913 TO 1922, INCLUSIVE

| Year. | Value. | Year. | Value. |
|-----------|-------------|-----------|-------------|
| 1913..... | \$2,297,171 | 1918..... | \$4,239,262 |
| 1914..... | 4,676,424 | 1919..... | 14,665,069 |
| 1915..... | 16,267,645 | 1920..... | 8,160,416 |
| 1916..... | 10,515,599 | 1921..... | 3,296,490 |
| 1917..... | 4,076,129 | 1922..... | 2,637,703 |

OTHER COUNTRIES.

THE ENGLISH MARKET.

All in all the wool textile trade in England enjoyed during 1922 more than average prosperity; in fact it had a greater measure than was experienced in many other industries. While all sections were not able to share in the trade expansion, (some important firms still being hampered by financial burdens carried over from the preceding season), perhaps the greatest sharers in the prosperity were those engaged in the earlier processes, topmakers and spinners being conspicuously busy throughout the year.

In the late months of 1921 signs of a return to a more normal cost-of-production basis and of more machinery activity, were becoming discernible. Germany was giving important support in every wool center, though even then, the fall of the mark caused apprehension as to her ability to continue to finance her large purchases. France, too, was showing signs of renewed activity and it was understood her wants would cause greater participation by French manufacturers in the quest for wool.

The outstanding feature of the year was the unexpectedly heavy demand for wool, part of which was due to the large weights needed to replenish depleted reserve stocks and keep them on a comparative basis with those of pre-war days. Enormous quantities were sold in the markets of all producing countries. In Australia alone about 3,000,000 bales were sold during the season ended June 30, while the clip amounted to only 1,750,000 bales, great weights being carried over from the previous year. From South America the shipments for the season, ended September 30, were 576,000 bales, while the production was estimated to have been approx-

imately 300,000 bales, of which Germany is said to have taken 190,000 bales. Sales in South Africa during the year were excellent and the carry-over stocks were abnormally light. In addition, nearly 1,000,000 bales of B. A. W. R. A. stocks were sold, leaving of that wool only about 920,000 bales in the hands of the Association at the close of the year, nearly all of which is crossbred wool.

The imports of wool, foreign and colonial, for the year, were no less than 1,105,600,000 pounds, with re-exports of 447,600,000 pounds—a movement of raw material unsurpassed in any year in the history of the British wool trade. The amount of foreign wool retained was about 658,000,000 pounds, to which must be added 40,000,000 pounds of domestic wool. Including the amount of the B. A. W. R. A. wool sold and kept in the country, it is estimated that the total amount retained in the United Kingdom in 1922 was over 800,000,000 pounds, compared with 633,000,000 pounds in 1913 and an average of 600,000,000 pounds for the five years immediately preceding the war.

The year opened with a surprisingly keen demand for wool, manufacturers and merchants deprecating any enhancement of prices, because they feared the rise might retard a trade revival. It resulted, however, in helping to clear old stocks and to stimulate those waiting for better trade. Even then Dawson & Company pointed out that invisible supplies in the hands of consumers were everywhere below normal and therefore “the visible stocks of free and B. A. W. R. A. wools which have loomed so large and threateningly begin to have a less formidable appearance.”

All through January raw material was forcing the pace, although there was no commensurate response from the manufacturing end of the industry. Skepticism prevailed respecting the soundness of the high prices for merinos and fine crossbreds. Because of the relative cheapness of medium and low sorts in comparison with the former, attention was beginning to be given to the latter and some speculation in them was suggested. The February sales closed with values slightly below the highest point of the series, British users having replenished stocks to a point which affected buying operations. The worsted branch of the industry was suffering from lack of orders, just as it was in the United States, it being estimated that less than 50 per cent of the looms were running. At the opening of the March series the market was quieter, an easing of prices having occurred since the close of the January series, although there was a strong undertone and a hopeful feeling.

Combers' books being well supplied with orders, application was made for permission to work over-time. Some of the trade union leaders recognized the justice of the request and agreed that permits should be given for six hours per week to be worked up to the end of March; but a resolution refusing to carry out the recommendation of the industrial council was passed by the operatives and the relief asked was denied. The chief obstacle to a settlement of the question was a demand by the Machine Wool Combers that all of their members should be employed before over-time should be allowed. Combers were further hampered by an effort to establish conditions under which employers would be obliged to apply to

the union for operatives, and by a decision of the wool sorters to restrict the amount of work each sorter would be permitted to do. Because of the refusal to permit over-time, the output of fine tops was not equal to the demands of the home and export trade, increased quantities of wool going to the Continent to be combed instead of to Bradford. Wool was changing hands faster than the requirements of machinery demanded and it was evident that a spirit of speculation was abroad, based upon a belief in the soundness of the wool position and its worth. During February the re-exports of foreign and colonial wool were on a larger scale than in any post-war month except August 1921, Germany, France, and even the United States taking substantially increased quantities.

The March series, at which a strong demand for merinos was shown by German spinners, and at which prices indicated no weakening at the close, gave ample proof of an increasing and widening demand for wool, especially from the Continent for lower grades and crossbreds. Notwithstanding the huge quantities offered in all markets, they were cleared in a remarkable manner. The demand from German spinners gathered strength despite the high prices for fine wools and a further depreciation of the mark. The upward price tendency met with resistance from manufacturers (still hampered by old stocks purchased at prices higher than those prevailing in the market) who regarded those current as too high for safety.

At the opening of the May sales keen competition for lower grades of crossbreds and for the common grades of merino combings was in evidence, an all round improvement in the tone of the market accompanying an increased demand. Confidence in the high level of prices for wool was due primarily to better demand, assisted by the statistical position of merinos, and also to the gradual improvement in the manufacturing end of the industry. The situation in the United States respecting the tariff rates on wool was so uncertain that operations on American account were too limited to affect the market materially. Early in May an extension of the demand from merinos to fine crossbreds and medium and low sorts, because of their comparative cheapness, was quite marked, causing prices to advance for qualities from 50's downward to 32's.

Commenting on the May sales, Dawson & Company said:

The past series has witnessed a remarkable revival of demand, together with a sharp advance for all grades of wool. Competition has been wide and general and the tone unusually confident. The position of the piece goods sections is the least satisfactory and is still below normal, but a progressive improvement has been realized during the past six months. Increasing orders have been booked with the Far East and the colonies and also with some European countries.

Consequently the immediate outlook in the textile trade is better than for a long time past. There is undoubtedly a general improvement in the volume of trade, which only needs some assurance against reaction to become established and even further developed. The future, however, is still somewhat uncertain. Merinos are now at a high level, the maintenance of which depends largely on the future course of action taken by the United States, and the support given by them. Yorkshire and the Continent generally feel that merinos are high enough for good, steady business, and in some cases consumers are beginning to give attention to the next lower grade to meet the price.

The renewed interest in crossbreds is very welcome and will do something towards reducing the abnormal disparity between fine and coarser grades. Meanwhile the position as regards crossbreds is apparently a safe one, although there are still heavy stocks in the hands of B. A. W. R. A. The demand, however, has widely developed, especially in Continental centers where cheap values have created new outlets. Medium and lower grade wools are still relatively cheap despite the 25 per cent advance realized since January. It is interesting also to know that U. S. A. buyers are operating in medium and fine grades, although the tariff schedule is still uncertain.**Financially the wool position is much improved by plentiful and cheaper money here and in the States; and this provides one of the strongest factors in the situation.

The exports of manufactured goods in April showed improvement for the second month in succession, it being estimated that they represented eighty-five per cent of the pre-war volume. In the four months ended with April, the exports to Japan were twice the volume for the corresponding period in 1913, and for the half year Japan took nearly 11,000,000 square yards of woollen tissue.

At the June series there was a pause in demand, attributed to accumulated stocks, which were said to fill warehouses in the West Riding from floor to ceiling, and heavy receipts from overseas markets, but the position was stronger than it appeared on the surface, and there was no basis for pessimism, the consumption of wool increasing rather than diminishing. Crossbreds suffered some decline, the offerings of which were very heavy in the early months of the year, many purchases being made as investments because of their cheapness and not for immediate machinery requirements. From the June sales B. A. W. R. A. withdrew 20,000 bales of crossbreds and offered no medium and coarse crossbreds during July, August, and September. During June a new wage agreement for a year went into effect, the reduction for both male and female time workers being 5.4 per cent of the then existing wage, and for male and female piece workers 2.7 and 4.8 per cent, respectively. Wages of wool combers were to be reduced in the same proportion as those of time workers.

The withdrawal of all B. A. W. R. A. wools from the July, August, and September sales strengthened, temporarily at least, crossbred prices which had shown some signs of weakness (because of heavy offerings) although the consumption of crossbreds was increasing rather than decreasing, there being a noticeable tendency to pay attention to fine grades of 58's and 56's. Unemployment was decreasing, especially in the woollen section, and although the manufacturers of fine worsteds were far from prosperous, there was a slight improvement with them.

At the August sales there was a strong demand for merinos and fine crossbreds from both Yorkshire, and the Continent, notwithstanding depreciated currency and exchange disadvantages. The demand from Germany showed no abatement. Although the ability of that country's manufacturers to finance their heavy purchases had been questioned many months previous, no unsurmountable difficulty had been encountered and the country's textile trade was very actively engaged in doing a prosperous business.

The improved position of raw material was attributed by Dawson &

Company "to the enormous consumption both on the Continent and at home", it being noted that although there had been "undoubtedly large offerings during the year, they had been fully absorbed and do not appear to have dulled the edge of demand." Combing production continued to fall below consumption and in yarns and piece goods there was continued improvement.

After the August vacation, there was a keen demand for merinos and fine crossbreds at the September sales which pushed prices up five per cent, notwithstanding the gravity of the German situation over the reparation question with France. Topmakers and spinners were well employed and business was steadily improving with old stocks exerting a much smaller influence in the market and the upward turn in prices bringing more confidence and increased demand. Prices for fine crossbred wool and tops were influenced by the inadequate supply of merinos, but they did not advance to the same extent, the disparity between a 64's and 40's top being no less than $46\frac{1}{2}$ d, whereas prior to the war the normal difference was about 13 d. Closing their comment on the September sales, Dawson & Company said that "prices are relatively high and have reached a level which manufacturers find difficult, but conditions of supply and machinery requirements are promoting more confidence. Medium and low crossbreds are hardly so favorably placed, but there is ample evidence of increased interest. Buyers are being less influenced by the existence of surplus stocks, and present prices are proving more attractive as consumption shows signs of extending."

A survey of conditions in October showed unemployment in Bradford district was less than "at any time since the slump". Some eighty firms, mostly spinners, had secured permits to work protected persons overtime while other firms found it difficult to secure suitable workers. At the October sales prices continued to mount, a strong preference being still shown for fine qualities despite the fact that a good 64's top was nearly double the price of a 56's and four times that of a 46's top. Because of the wide difference in price, increasing interest was shown in 60's, 58's, and 56's, the trade hoping to get some relief from high priced merinos. This attention to the cheaper grades was welcomed as a move to reduce the disparity and ease the position of merinos as well as to assure an extension of manufacturing activity on a safe, workable basis. The tariff bill having been enacted, American interests after an absence of nearly two years, were well represented at the October sales and competed strongly, a competition which helped to push the prices for all grades up another notch or two.

At the November-December series American demands for fine and medium crossbreds caused prices for them to strengthen. The entrance of buyers on American account came at a time when German buyers were quiescent and it compensated for the inactivity of the latter. The outstanding feature in November, Dawson & Company said in their circular on the opening of the series, "is the great resistance by consumers to advancing values in merinos, although the hopes of success by such resistance are not too well assured."

The world demand for raw material, the extraordinary machinery activity in Great Britain, Europe and the United States, and an increase of British wool exports all pointed to an undercurrent of strength and confidence and the market closed the last of December with a firm and hardening tendency for nearly all sorts of crossbreds.

On an average, prices for wool at the close of 1922 were less than 50 per cent above the level of July 1914. Compared with December 1921 merinos were about 30 to 40 per cent dearer; fine crossbreds were 50 to 55 per cent dearer, and other crossbreds about 30 to 40 per cent dearer. Compared with the high point touched in May, prices at the end of December for merinos and coarse crossbreds showed a comparatively small advance, but a substantial one in fine and medium crossbreds.

As the general level for commodity prices was 60 per cent above that of July, 1914, crossbred wools, the *Wool Chart* said, "do not show the increase which is justified by the reduced value of money."

As to piece goods, a comparison is difficult to make, owing to the wide range of qualities and types. In the first half of 1923, the *Wool Chart* said, "wages in the wool textile industry per unit of time will be from 108 to 120 per cent above pre-war rates and an analysis of the export trade returns suggests that the average increase in the price of finished goods compared with before the war is from 100 to 125 per cent.

The exports of wool manufactures from the United Kingdom increased greatly during the year, the total quantity for the twelve months comparing favorably with that of the year 1913. Figures for exports of worsted tissue were practically the same as in 1913, while those for woollen tissue were 15,605,000 yards larger. Exports of worsted yarns were only about 7,000,000 pounds less than in 1913. Those of woollen yarns were double the 1913 exports, while mohair yarn exports were 9,983,000 pounds less than in 1913. A feature of the export trade was the exceedingly large demand for tissue from Japan which not only exceeded the volume of the boom period but the pre-war standard, she taking 7,326,000 square yards of worsted and 19,174,000 square yards of woollen tissue during the year, in addition to 2,418,000 pounds of tops. Germany took 10,386,000 pounds of tops and 17,443,000 pounds of worsted yarns.

Some of the factors contributing to the extraordinary demand for, and consumption of, wool were the necessity of replenishing depleted supplies made into unsalable stocks of finished goods in some of the principal countries. This movement, begun the latter part of the previous year, was continued in 1922, purchases of wool being made easy by a plentiful supply of money available at low rates of interest. But above all was the distinct revival in the demand for textile products and the consequent greater activity of consuming machinery in all manufacturing countries. Germany bought heavily until the disastrous fall of the mark's value, while France and Belgium were important factors until the last two months of the year. Italy, too, was no mean competitor in the primary markets, and Japan, whose spindles are said to be four times as many as they were before the war, bought considerably heavier weights of wool in Australia than in previous years. While shorter hours of labor are in force

it is said the decreased production because of them has been more than counterbalanced by plant extension, and the greater speed with which wool is now going through the combs, estimated by the British Wool Federation at 15 per cent as compared with pre-war years. The rapid growth of business in knitted wear is another important factor in increased wool consumption. All these influences mentioned and others brought about a great change in the year, altered the outlook completely, and filled those engaged in wool growing, its sale, and manufacture with confidence and hope.

To give some idea of prices for tops, the following table is reproduced, showing prices in comparison with a year ago, and with July, 1914.

| Tops. | July 1914. | December 1921. | December 1922. |
|---------------------|---------------|-------------------|-------------------|
| | <i>d.</i> | <i>d.</i> | <i>d.</i> |
| 70's merino..... | 33 | 47 | 65 |
| 64's merino..... | 32½ | 43 | 62 |
| 60's super..... | 31½ | 40 | 56 |
| 60's ordinary..... | 31 | 38 | 52 |
| 58's crossbred..... | 26½ | 33½ | 46 |
| 56's crossbred..... | 23¾ | 26 | 36 |
| 50's crossbred..... | 20½ | 20 | 26 |
| 46's carded..... | 17¼ | 14 | 17½ |
| 40's prepared..... | 16¼ | 12¼ | 14¾ |
| 32's prepared..... | 15¾ | 12 | 14¼ |

The following table shows the number of sheep in the United Kingdom and the wool production for twelve years, from 1910 to 1922, inclusive.

NUMBER OF SHEEP AND WOOL PRODUCTION OF THE UNITED KINGDOM,
YEARS 1911 TO 1922, INCLUSIVE.

| Year | Number of Sheep. | Wool Pro- duction. | Year. | Number of Sheep. | Wool Pro- duction. |
|-----------|---------------------|-----------------------|----------|---------------------|-----------------------|
| 1911..... | 30,479,807 | 136,143,000 | 1917.... | 27,850,252 | 125,176,066 |
| 1912..... | 28,954,805 | 123,754,430 | 1918.... | 27,062,681 | 119,736,277 |
| 1913..... | 27,629,206 | 125,122,000 | 1919.... | 25,047,694 | 115,658,564 |
| 1914..... | 27,960,114 | 121,200,043 | 1920.... | 23,329,226 | 104,820,517 |
| 1915..... | 28,275,970 | 122,474,977 | 1921.... | 24,198,314 | 101,100,000 |
| 1916..... | 28,849,655 | 124,408,000 | 1922.... | 24,218,305 | 103,000,000 |

WOOL DISPOSALS AT LONDON SALES.

THE following table shows the quantity of wool offered and sold at each of the sales in London in 1922; also the aggregate sales in comparison with 1921 and 1913:—

| In 1,000 Bales Series. | | Sold. | | | |
|------------------------|----------|--------|-------------|-----------------|----------|
| | Offered. | Total. | Home Trade. | Con- tinent. | U. S. A. |
| Jan. 10—Feb. 2..... | 192½ | 183 | 111 | 70 | 2 |
| Mar. 7—30..... | 216½ | 210 | 124 | 85 | 1 |
| May 2—19..... | 157½ | 155 | 102 | 50 | 3 |
| June 13—28..... | 155½ | 144½ | 91½ | 50 | 3 |
| July 18—Aug. 3..... | 150½ | 133 | 70 | 62 | 1 |
| Sept. 4—15..... | 129 | 117 | 72 | 42 | 3 |
| Oct. 10—26..... | 140 | 133½ | 75½ | 50 | 8 |
| Nov. 22—Dec. 15..... | 223 | 208 | 124 | 64 | 20 |
| Total 1922..... | 1,364½ | 1,284 | 770 | 473 | 41 |
| Total 1921..... | 1,097 | 920½ | 467½ | 438½ | 14½ |
| Total 1913..... | 851½ | 790 | 469 | 298 | 23 |

The amount of wool sold in 1922 was the largest since 1901. The total sales during 1922 (including Liverpool, Hull, and London) are a record for all time.

LONDON COLONIAL WOOL SALES, 1922.

| | 1st Series. | 2nd Series. | 3rd Series. | 4th Series. | 5th Series. | 6th Series. |
|--------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | <i>Bales.</i> | <i>Bales.</i> | <i>Bales.</i> | <i>Bales.</i> | <i>Bales.</i> | <i>Bales.</i> |
| Sydney..... | 22,023 | 37,211 | 26,531 | 17,917 | 21,036 | 27,501 |
| Queensland..... | 45,697 | 37,817 | 13,022 | 16,784 | 12,200 | 9,058 |
| Port Phillip..... | 26,724 | 20,306 | 22,056 | 9,493 | 18,059 | 22,872 |
| Adelaide..... | 5,331 | 12,123 | 4,519 | 5,484 | 8,270 | 7,188 |
| Tasmanian..... | 1,192 | 4,652 | 568 | 1,894 | 1,434 | 1,982 |
| Western Australian..... | 5,478 | 13,697 | 28,477 | 21,901 | 12,022 | 5,148 |
| New Zealand..... | 56,483 | 69,238 | 49,796 | 63,688 | 47,265 | 38,272 |
| Australasian..... | 162,928 | 195,044 | 144,969 | 137,161 | 120,286 | 112,021 |
| Cape..... | 11,998 | 11,651 | 9,666 | 10,879 | 9,205 | 2,251 |
| Colonial Catalogued..... | 174,926 | 206,695 | 154,635 | 148,040 | 129,491 | 114,272 |
| Actually sold..... | 167,000 | 200,000 | 153,000 | 138,000 | 118,000 | 105,000 |
| Bought for { Home..... | 103,000 | 121,000 | 101,000 | 85,000 | 66,000 | 66,000 |
| { Continent..... | 62,000 | 78,000 | 49,000 | 50,000 | 51,000 | 36,000 |
| { America..... | 2,000 | 1,000 | 3,000 | 3,000 | 1,000 | 3,000 |

| | 7th Series. | 8th Series. | Total 1922. | Total 1921. | Total 1920. |
|--------------------------|----------------|----------------|----------------|----------------|----------------|
| | <i>Bales.</i> | <i>Bales.</i> | <i>Bales.</i> | <i>Bales.</i> | <i>Bales.</i> |
| Sydney..... | 21,199 | 52,260 | 225,678 | 217,779 | 278,948 |
| Queensland..... | 6,678 | 23,596 | 164,852 | 150,718 | 88,146 |
| Port Phillip..... | 24,630 | 38,239 | 182,379 | 119,109 | 274,162 |
| Adelaide..... | 6,268 | 5,177 | 54,360 | 59,903 | 55,084 |
| Tasmanian..... | 2,733 | 655 | 15,110 | 15,653 | 33,374 |
| Western Australian..... | 4,013 | 6,105 | 96,841 | 109,766 | 104,549 |
| New Zealand..... | 56,814 | 85,507 | 467,063 | 300,928 | 329,829 |
| Australasian..... | 122,335 | 211,539 | 1,206,283 | 973,856 | 1,164,092 |
| Cape..... | 1,499 | 1,328 | 58,477 | 19,639 | 59,428 |
| Colonial Catalogued..... | 123,834 | 212,867 | 1,264,760 | 993,495 | 1,223,520 |
| Actually sold..... | 118,000 | 200,000 | 1,199,000 | 846,000 | 852,000 |
| Bought for { Home..... | 68,000 | 119,000 | 729,000 | 435,500 | 602,000 |
| { Continent..... | 42,000 | 61,000 | 429,000 | 396,000 | 226,000 |
| { America..... | 8,000 | 20,000 | 41,000 | 14,500 | 24,000 |

COLONIAL WOOL SALES AT LIVERPOOL AND HULL, 1922.

| | Liverpool Feb. 9. | Hull Feb. 16. | Hull April 6. | Liverpool May 25. | Liverpool July 6. | Hull July 13. |
|--------------------------|----------------------|------------------|------------------|----------------------|----------------------|------------------|
| | <i>Bales.</i> | <i>Bales.</i> | <i>Bales.</i> | <i>Bales.</i> | <i>Bales.</i> | <i>Bales.</i> |
| Sydney..... | 6,030 | 13,280 | 12,181 | 10,869 | 7,282 | 9,814 |
| Queensland..... | 3,373 | 3,635 | 427 | 3,701 | 2,834 | 1,538 |
| Port Phillip..... | 3,481 | 2,481 | 1,232 | 3,728 | 5,557 | 6,192 |
| Adelaide..... | 2,192 | 2,540 | 3,317 | 6,393 | 4,065 | 2,460 |
| Tasmanian..... | 1,983 | 735 | ..... | 3 | ..... | 2,693 |
| West Australian..... | 2,880 | 396 | ..... | 1,728 | 1,531 | ..... |
| New Zealand..... | 6,922 | 6,780 | 7,197 | 12,012 | ..... | 595 |
| Cape..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Colonial Catalogued..... | 26,861 | 29,847 | 24,354 | 38,434 | 21,269 | 23,292 |
| Falkland Islands..... | ..... | ..... | ..... | ..... | ..... | ..... |

| | Hull Sept. 21. | Liverpool Sept. 28. | Hull Nov. 9. | Liverpool Nov. 16. | Total 1922. | Total 1921. |
|--------------------------|-------------------|------------------------|-----------------|-----------------------|----------------|----------------|
| | <i>Bales.</i> | <i>Bales.</i> | <i>Bales.</i> | <i>Bales.</i> | <i>Bales.</i> | <i>Bales.</i> |
| Sydney..... | 10,209 | 6,114 | 8,286 | 5,724 | 89,789 | 50,964 |
| Queensland..... | 312 | 1,469 | 1,244 | 4,167 | 22,700 | 48,157 |
| Port Phillip..... | 4,913 | 7,723 | 6,178 | 5,399 | 46,884 | 36,463 |
| Adelaide..... | 7,441 | 4,742 | 3,265 | 3,147 | 39,562 | 17,845 |
| Tasmanian..... | 1,059 | 1,249 | 3,048 | ..... | 10,770 | 8,109 |
| West Australian..... | ..... | 2,381 | ..... | 4,492 | 13,408 | 5,581 |
| New Zealand..... | 8,256 | 11,316 | 7,994 | 7,744 | 68,816 | 41,817 |
| Cape..... | ..... | ..... | ..... | ..... | ..... | 1 |
| Colonial Catalogued..... | 32,190 | 34,994 | 30,015 | 30,673 | 291,929 | 208,937 |
| Falkland Island..... | ..... | ..... | ..... | ..... | ..... | 2,308 |

LIVERPOOL WOOL SALES, 1922.

| | 1st Series. | 2nd Series. | 3rd Series. | 4th Series. | 5th Series. |
|--|----------------|----------------|----------------|----------------|----------------|
| | <i>Bales.</i> | <i>Bales.</i> | <i>Bales.</i> | <i>Bales.</i> | <i>Bales.</i> |
| East India | 12,482 | 16,238 | 32,062 | 28,270 | 16,490 |
| Turkish, Syrian and Persian | | 19 | | | |
| Egyptian | | 631 | | | 562 |
| Morocco | | | | | |
| Portuguese and Spanish | | 230 | 12 | 13 | 222 |
| River Plate and Patagonian | 2,837 | 1,680 | 1,799 | | 1,071 |
| Peru, Lima, Bolivian and Chilian | 2,991 | 2,398 | 2,852 | 2,094 | 2,184 |
| Sun Iries | 63 | 739 | 208 | 99 | 1,120 |
| Total Catalogued Bales | 18,373 | 21,935 | 36,933 | 30,476 | 21,649 |
| Sold East India | 12,200 | 15,196 | 31,887 | 27,986 | 15,882 |
| Sold Miscellaneous | 3,810 | 3,014 | 1,764 | 1,825 | 2,567 |

| | 6th Series. | 7th Series. | 8th Series. | Total 1922. | Total 1921. |
|--|----------------|----------------|----------------|----------------|----------------|
| | <i>Bales.</i> | <i>Bales.</i> | <i>Bales.</i> | <i>Bales.</i> | <i>Bales.</i> |
| East India | 37,678 | 18,031 | 18,831 | 180,082 | 120,397 |
| Turkish, Syrian and Persian | 61 | | 110 | 190 | 848 |
| Egyptian | 289 | | 329 | 1,811 | 3,455 |
| Morocco | | | | | |
| Portuguese and Spanish | | 49 | 164 | 690 | 1,644 |
| River Plate and Patagonian | | | | 7,387 | 4,355 |
| Peru, Lima, Bolivian and Chilian | | 1,580 | 2,843 | 16,942 | 7,527 |
| Sundries | 364 | 37 | 257 | 2,887 | 2,566 |
| Total Catalogued Bales | 38,392 | 19,697 | 22,534 | 209,989 | 140,792 |
| Sold East India | 36,321 | 17,710 | 18,294 | 175,476 | 100,883 |
| Sold Miscellaneous | 396 | 1,009 | 3,171 | 17,556 | 5,541 |

AUSTRALASIA.

Dalgety's Wool Review, the authoritative and widely known statistical publication covering the wool growing and wool manufacturing industries of Australasia, gives in the table which follows, the figures for sheep in the several states of the Commonwealth, for New Zealand, and the total for Australasia in the year 1921. The increase in 1921 over the numbers reported in the preceding year for the Commonwealth alone was 6,253,806, but a loss of 634,939 in New Zealand reduced the net gain for Australasia to 5,618,867. The total of 102,305,851 reported for Australasia in 1921 is 11,452,272 smaller than the total for the year 1918, the largest total in the table, though it is 7,916,680 larger than the small total of 94,389,171 reported in 1915. The increase reported as occurring during a period of low prices for wool the world over, is encouraging and leads to the hope, if droughts and consequent lack of forage did not cause heavy losses during 1922, that an approach to the large figures of 1917, 1919, 1913, and 1918 may be reached within a reasonable time.

SHEEP RETURNS.

| States. | 1921. | 1920. | 1919. | 1918. | 1917. |
|----------------------|-------------|------------|-------------|-------------|-------------|
| New South Wales..... | 33,851,828 | 29,901,701 | 37,381,874 | 39,018,928 | 37,455,330 |
| Victoria..... | 12,325,818 | 12,171,084 | 14,422,745 | 15,773,902 | 14,760,013 |
| Queensland..... | 18,400,000 | 16,596,803 | 16,633,746 | 18,220,985 | 15,812,425 |
| South Australia..... | 6,359,944 | 6,014,565 | 6,625,184 | 6,229,519 | 5,091,282 |
| West Australia..... | 6,505,230 | 6,527,861 | 6,697,950 | 7,161,402 | 6,454,957 |
| Tasmania..... | 1,578,000 | 1,555,000 | 1,781,000 | 1,841,944 | 1,709,343 |
| Commonwealth..... | 79,020,820 | 72,767,014 | 83,542,499 | 88,246,680 | 81,283,350 |
| New Zealand..... | 23,285,031 | 23,919,970 | 25,828,554 | 26,538,302 | 25,270,386 |
| Australasia..... | 102,305,851 | 96,686,984 | 109,371,053 | 114,784,982 | 106,553,736 |

| | 1916. | 1915. | 1914. | 1913. |
|----------------------|------------|------------|-------------|-------------|
| New South Wales..... | 33,713,901 | 33,009,033 | 36,287,000 | 39,842,518 |
| Victoria..... | 12,576,587 | 10,545,632 | 12,051,685 | 12,113,682 |
| Queensland..... | 15,245,508 | 16,107,225 | 23,129,919 | 21,786,600 |
| South Australia..... | 3,800,000 | 3,674,547 | 4,208,461 | 5,073,057 |
| West Australia..... | 5,501,000 | 4,831,727 | 4,471,941 | 4,418,402 |
| Tasmania..... | 1,702,579 | 1,613,139 | 1,862,600 | 1,862,600 |
| Commonwealth..... | 72,539,575 | 69,781,303 | 82,011,606 | 85,096,859 |
| New Zealand..... | 24,788,150 | 24,901,421 | 24,798,763 | 24,191,810 |
| Australasia..... | 97,327,725 | 94,682,724 | 106,810,369 | 109,288,669 |

| States. | 1912. | 1911. | 1910. | 1909. |
|----------------------|-------------|-------------|-------------|-------------|
| New South Wales..... | 39,436,118 | 45,032,022 | 45,825,308 | 46,194,178 |
| Victoria..... | 11,892,224 | 13,857,804 | 12,937,983 | 12,937,983 |
| Queensland..... | 20,248,580 | 20,387,838 | 20,153,239 | 19,593,791 |
| South Australia..... | 5,481,487 | 6,267,477 | 6,432,038 | 6,898,450 |
| West Australia..... | 4,593,458 | 5,408,583 | 5,157,658 | 4,692,419 |
| Tasmania..... | 1,800,000 | 1,788,310 | 1,735,000 | 1,728,053 |
| Commonwealth..... | 83,451,867 | 92,742,034 | 92,241,226 | 92,044,874 |
| New Zealand..... | 23,750,153 | 24,269,620 | 23,792,947 | 23,480,707 |
| Australasia..... | 107,202,020 | 117,011,654 | 116,034,173 | 115,525,581 |

The net production of wool for the Commonwealth and New Zealand in bales and pounds for the last three seasons, the production for 1920-1921 and 1921-1922 being estimated, was as follows:

NET PRODUCTION AND WEIGHT.

| States. | 1921-22. (Estimated.) | | 1920-21. (Estimated.) | | 1919-20. | |
|---------------------------|--------------------------|-------------|--------------------------|-------------|-------------|-------------|
| | Production. | Net Weight. | Production. | Net Weight. | Production. | Net Weight. |
| | Bales. | Pounds. | Bales. | Pounds. | Bales. | Pounds. |
| New South Wales | 880,000 | 282,568,000 | 740,000 | 246,420,000 | 940,190 | 299,920,610 |
| Victoria | 340,000 | 103,326,000 | 300,000 | 92,100,000 | 439,066 | 132,158,866 |
| Queensland | 409,000 | 139,141,800 | 325,054 | 111,818,576 | 324,130 | 104,693,990 |
| South Australia | 155,000 | 51,196,500 | 123,647 | 39,937,981 | 181,447 | 58,244,487 |
| West Australia | 120,136 | 38,863,996 | 112,385 | 35,963,200 | 122,378 | 40,507,118 |
| Tasmania | 37,000 | 11,248,000 | 34,000 | 10,302,000 | 38,701 | 11,532,898 |
| Commonwealth | 1,941,136 | 626,344,296 | 1,635,086 | 536,541,757 | 2,045,912 | 647,057,969 |
| New Zealand | 533,000 | 191,613,500 | 520,000 | 181,480,000 | 580,093 | 204,964,515 |
| Australasia | 2,474,136 | 817,957,796 | 2,155,086 | 718,021,757 | 2,626,005 | 852,022,484 |

At the close of the 1920-1921 season (during which 1,635,955 fewer bales were sold than in the preceding season) unsold stocks in the Commonwealth amounted to 537,946 bales. As a result, pessimism was prevalent and a lack of faith in the future of the industry was noticeable. When, however, the season of 1921-1922 closed with the carry-over wools sold and with increased sales of 1,704,089 bales, pessimism vanished, faith in the industry's stability was restored, and confidence that merino and fine crossbred wools would command prices above the pre-war levels was generally felt. As the *Review* says, "it was a remarkable change from a phenomenally depressing wool season to a thoroughly sound and satisfactory statistical wool year." The turn did not come suddenly but gradually, the demand increasing as the season advanced.

We said a year or two ago, that what was needed to bring improvement in the wool markets was not the passage of the wool textile branding bills, but to get the wool machinery in the manufacturing countries of the world started. That statement is so well re-enforced by the editor of the *Review* that we can not refrain from summarizing what is there stated in explanation of the stagnation prevalent a few seasons ago and the marked change which came in the past season. Describing tersely conditions immediately after the war, the *Review* says that "millions of wool-textile consuming people had been deprived during the war of all kinds of woollen necessities; raw material had banked up in primary markets; textile mills and employes were waiting for all classes of wool to transform into fabric, and manufacturers were anxious to execute orders as soon as the economic balance upset by the war could be restored. That was the problem confronting the nations directly disorganized by the war, and it took a greater length of time to solve than seemed probable on the signing of the armistice."

It was hoped by the optimistic that at the end of a transition period of two or three years, most of the difficulties would be overcome; but the war shock was too great for so prompt a recovery, and it was because the transition period did not pass through its extreme phase until 1920-21 that the season was the worst experienced in the history of the Australasian wool industry. All the essentials for a return to peaceful prosperity were existent as soon as the means of exchange and credit could be arranged and with the economic improvement in the world, the turn for the better was made. It was not the fixing of price limits for wools but the improvement in, and restoration of, trade and the ability of wool manufacturers to obtain raw material and pass along the product of their mills into the hands of distributors and millions of people deprived of them during the war, that were the causes of the great advance made in the season under review.

So marked was the gain made that the burdensome restrictions imposed for six months by governmental regulations put into force on May 9, 1921, which provided that exported wools should not be sold below limits based on a flat rate of 8 d. per pound on grease wool and that shippers could not export wools unless they declared that their wool had been purchased on the flat basis rate and would not be sold below the reserve limits, were not extended beyond the original limit of six months except for two weeks, although the chairman of the B. A. W. R. A. urged the Prime Minister to extend them for an additional six months.

To explain the preference for clothes made from the finer and more expensive wools, the London correspondent of *Dalgety's Review* is quoted as stating that the ultimate price for a suit of clothes made from crossbred or merino wool is very little in favor of the former, and public demand naturally centers around the better article produced at a price only 6 per cent greater.

A table showing the relative difference in cost between a suit made from merino and one from crossbred wool is as follows:

| | Crossbred. 40's. | Merino. 64's. | Relative cost of Crossbred. |
|---|---------------------|-------------------|--------------------------------|
| | d. | d. | % |
| London cost of clean wool, per lb. | 6 $\frac{1}{2}$ | 30 | 21 |
| Conversion into tops..... | 5 $\frac{1}{2}$ | 12 | 46 |
| Cost in tops..... | d. | d. | % |
| Spinning conversion, (equal counts)..... | 12 | 42 | 29 |
| | 16 | 16 | 100 |
| | 28 | 58 | 48 |
| Cost of yarn per oz. | 1 $\frac{3}{4}$ | 3 5-8 | 48 |
| Weaving, per oz..... | 1 $\frac{1}{4}$ | 1 3-8 | 91 |
| Dyeing and finishing, per oz.... | $\frac{3}{4}$ | $\frac{3}{4}$ | 100 |
| | 3 $\frac{3}{4}$ | 5 $\frac{3}{4}$ | 66 |
| 10 oz. ladies' costume cloth, per yard | 37 $\frac{1}{2}$ | 57 $\frac{1}{2}$ | 66 |
| 5 yds. costume length..... | 187 $\frac{1}{2}$ | 287 $\frac{1}{2}$ | 66 |

| | £. | s. | d. | £. | s. | d. | |
|-------------------------------------|----|----|----|----|----|-----|-----|
| Tailor made (varies £4 to £12)— | | | | | | | |
| Equals..... | 0 | 15 | 7½ | 1 | 3 | 11½ | 66 |
| Presume..... | 6 | 0 | 0 | 6 | 0 | 0 | 100 |
| | 6 | 15 | 7½ | 7 | 3 | 11½ | 94 |
| 16 oz. men's wear cloth, per yard | 0 | 5 | 0 | 0 | 7 | 8 | 66 |
| 3¼ yards suit length..... | 0 | 16 | 3 | 1 | 4 | 11 | 66 |
| Tailor-made (varies from £3 to £10) | | | | | | | |
| Presume..... | 6 | 0 | 0 | 6 | 0 | 0 | 100 |
| | 6 | 16 | 3 | 7 | 4 | 11 | 94 |

The following tables show the proportion of merino and crossbred wools sold in the States of Australia and in Australasia during the seasons 1921-1922 and 1920-1921.

Contrary to expectation, the production of merinos, prices for which reached unusually high levels, was not, if sales can be considered a criterion, increased proportionately. On the contrary, the sales of crossbreds increased markedly in almost all the markets, which may have been due to their relative cheapness when compared with merinos. In all the markets except Brisbane, the sales of merinos decreased in percentage, and the sales of crossbreds increased, the greatest losses being registered in West Australia, Geelong, Melbourne, and Sydney, where they were 14, 17, 24, and 17 per cent, respectively. For Australasia, the percentage of merinos sold during the season 1921-1922 was 59, and of crossbreds 41, the percentages for the previous season being 68 and 32, respectively. In the season of 1917-1918, the merino wools constituted 66.93 per cent and the crossbreds 33.07 per cent of the total. In 1918-1919, the former fell to 63.53 per cent and crossbreds rose to 36.47 per cent. In the season of 1919-1920, the percentage of merinos was 68.69 and of crossbreds 31.31.

PROPORTION OF MERINO AND CROSSBRED WOOLS SOLD IN THE STATES OF AUSTRALIA AND IN AUSTRALASIA, SEASONS, 1921-1922 AND 1920-1921.

| Description. | Sydney. | | Melbourne.* | | Geelong. | | Adelaide. | | W. Australia. | |
|---------------------------|---------------|----------|---------------|----------|---------------|----------|---------------|----------|---------------|----------|
| | <i>Bales.</i> | <i>%</i> | <i>Bales.</i> | <i>%</i> | <i>Bales.</i> | <i>%</i> | <i>Bales.</i> | <i>%</i> | <i>Bales.</i> | <i>%</i> |
| Merino..... | 674,103 | 73 | 191,143 | 42 | 68,384 | 45 | 214,124 | 94 | 57,271 | 82 |
| Crossbred and Strong wool | 246,803 | 27 | 264,329 | 58 | 84,173 | 55 | 14,671 | 6 | 12,863 | 18 |
| | 920,906 | | 455,472 | | 152,557 | | 228,795 | | 70,134 | |

| Description. | Brisbane. | | Tasmania. | | N. Zealand. | | Total 1921-22 | |
|----------------------------|---------------|----------|---------------|----------|---------------|----------|---------------|----------|
| | <i>Bales.</i> | <i>%</i> | <i>Bales.</i> | <i>%</i> | <i>Bales.</i> | <i>%</i> | <i>Bales.</i> | <i>%</i> |
| Merino..... | 364,855 | 98 | 8,511 | 32 | 12,414 | 3 | 1,590,805 | 59 |
| Crossbred and Strong wool. | 7,135 | 2 | 18,393 | 68 | 454,967 | 97 | 1,103,334 | 41 |
| | 371,990 | | 26,904 | | 467,381 | | 2,694,139 | |

*Including Ballarat and Albury.

SEASON 1920-1921.

| Description. | Sydney. | | Melbourne.* | | Geelong. | | Adelaide. | | W. Australia. | |
|----------------------------|---------------|----------|---------------|----------|---------------|----------|---------------|----------|---------------|----------|
| | <i>Bales.</i> | <i>%</i> | <i>Bales.</i> | <i>%</i> | <i>Bales.</i> | <i>%</i> | <i>Bales.</i> | <i>%</i> | <i>Bales.</i> | <i>%</i> |
| Merino..... | 286,142 | 90 | 99,435 | 66 | 34,368 | 62 | 78,193 | 98 | 30,956 | 96 |
| Crossbred and Strong wool. | 32,786 | 10 | 51,260 | 34 | 21,291 | 38 | 1,855 | 2 | 1,281 | 4 |
| | 318,928 | | 150,695 | | 55,659 | | 80,048 | | 32,237 | |

| Description. | Brisbane. | | Tasmania. | | N. Zealand. | | Total 1920-21 | |
|----------------------------|---------------|----------|---------------|----------|---------------|----------|---------------|----------|
| | <i>Bales.</i> | <i>%</i> | <i>Bales.</i> | <i>%</i> | <i>Bales.</i> | <i>%</i> | <i>Bales.</i> | <i>%</i> |
| Merino..... | 127,304 | 98 | 10,230 | 43 | 7,062 | 4 | 673,690 | 68 |
| Crossbred and Strong wool. | 2,607 | 2 | 13,701 | 57 | 191,579 | 96 | 316,360 | 32 |
| | 129,911 | | 23,931 | | 198,641 | | 990,050 | |

*Including Ballarat and Albury.

MERINO PRODUCING STATES.

Treating of the crossbred and merino situation the *Review* states that Queensland leads the way as the merino wool growing state in the Commonwealth followed in the order of proportion of merino to crossbred by South Australia. The principal sheep raising districts in the two states are typical pastoral country eminently suitable for merino wool growing where large flocks predominate to a greater extent than in any other states, although they do not eclipse the back country slopes and plains of New South Wales, where merinos are depastured on the runs equal in size and importance to any flocks in any other part of the Commonwealth. Queensland and South Australia have not been so greatly influenced in the change from merinos to crossbred through either the export of mutton and lamb trade or close settlement, as other states. In Central Queensland there are no crossbred sheep except a few Corriedale, inasmuch as the merino is best adapted to the climatic conditions of the district. In North Queensland no sustained effort has been made to introduce the British breeds and there is no likelihood of such a move proving successful, that section being essentially a merino producing country. With a better market for fat sheep small holders near the railway could probably be induced to consider the introduction of crossbreds; but in any case the supremacy of the merino, it is stated, is never likely to be challenged.

In Victoria where more than half the wool is crossbred, it is reported that an effort to "fine-up" the medium and coarse crossbreds by the use of merino rams has been taking place and it is probable that the next two clips will have a greater proportion of comeback and fine crossbred in them than for some years.

The report states that the movement of growers in Victoria is probably what will take place with flockmasters in regard to merinos now that the demand for really fine wools is so pronounced at prices remunerative to

growers. Wools below fifty-sixes in quality can be grown in abundance, the report says, in most other parts of the world and wools of sixty-fours quality and upwards can be grown in a larger proportion in Australia than in any other country of the world and it adds that there are still large supplies of coarse wools and very little of merino growth, particularly of seventies to eighties quality. Consequently there is great inducement to increase rather than diminish the proportion of fine merino to other qualities.

During the season of 1920-21, 68 per cent of merino and 32 per cent of crossbred wool, were sold in the Commonwealth and New Zealand, compared with 59 per cent merino and 41 per cent of crossbred in the season of 1921-1922, an indicated decrease of 9 per cent in the quantity of merino grown in the latter season. The reader is warned not to accept these figures as the actual growing position because in 1920-1921 when a considerable proportion of the clip much of which was crossbred, could not be disposed of, the sales that season did not indicate the production. In a different way, through much of the carry-over wool sold in the 1921-1922 season being crossbred grown in the previous season, the sales failed to reflect the season's actual production.

The offerings in the Brisbane market showed no alteration in the proportion of merino to crossbred. At Adelaide the sales indicated a slight increase in crossbred. The proportion of merino to crossbred sold in the Sydney market during the past two seasons as indicated in the following table shows the varying percentages for the seasons:

| Seasons. | Merino. | | Crossbred. | |
|--------------|---------|-----------|------------|-----------|
| | Bales. | Per Cent. | Bales. | Per Cent. |
| 1921-22..... | 674,103 | 73 | 246,803 | 27 |
| 1920-21..... | 286,142 | 90 | 32,786 | 10 |
| 1919-20..... | 516,975 | 69 | 227,195 | 31 |
| 1918-19..... | 536,419 | 70 | 229,894 | 30 |
| 1917-18..... | 560,717 | 75 | 186,906 | 25 |
| 1916-17..... | 579,948 | 82 | 127,306 | 18 |
| 1915-16..... | 608,853 | 86 | 99,116 | 14 |
| 1914-15..... | 476,321 | 87 | 71,175 | 13 |
| 1913-14..... | 698,699 | 90 | 76,744 | 10 |
| 1912-13..... | 616,272 | 93 | 48,210 | 7 |

AUSTRALASIAN WOOL SALES.

The Australian sales for the season of 1921-1922 were larger by 180,846 bales than in any season from 1910-1911 to 1921-1922 inclusive. Likewise the Australasian sales were larger in the season 1921-1922 by 35,392 bales than in any of the seasons reported in the table. On the contrary, the sales of New Zealand wools in the last season were 160,450 bales smaller than in the season 1918-1919 and they were also very considerably smaller than in the seasons 1916-1917, 1917-1918, and 1919-1920.

TOTAL SALES.

| Centres. | 1921-22 | 1920-21 | 1919-20 | 1918-19 |
|---------------------|---------------|---------------|---------------|---------------|
| | <i>Bales.</i> | <i>Bales.</i> | <i>Bales.</i> | <i>Bales.</i> |
| Sydney..... | 920,906 | 318,928 | 744,170 | 766,313 |
| *Melbourne..... | 455,472 | 150,695 | 449,203 | 460,987 |
| Geelong..... | 152,557 | 55,659 | 158,514 | 141,383 |
| Adelaide..... | 228,795 | 80,048 | 213,754 | 190,752 |
| West Australia..... | 70,134 | 32,237 | 122,341 | 130,596 |
| Brisbane..... | 371,990 | 129,911 | 319,922 | 304,583 |
| Tasmania..... | 26,904 | 23,931 | 38,008 | 36,302 |
| Commonwealth..... | 2,226,758 | 791,409 | 2,045,912 | 2,030,916 |
| New Zealand..... | 467,381 | 198,641 | 580,093 | 627,831 |
| Australasia..... | 2,694,139 | 990,050 | 2,626,005 | 2,658,747 |

| Centres. | 1917-18 | 1916-17 | 1915-16 | 1914-15 |
|---------------------|---------------|---------------|---------------|---------------|
| | <i>Bales.</i> | <i>Bales.</i> | <i>Bales.</i> | <i>Bales.</i> |
| Sydney..... | 747,623 | 707,254 | 707,969 | 547,496 |
| *Melbourne..... | 378,736 | 348,467 | 263,270 | 278,061 |
| Geelong..... | 132,533 | 118,567 | 86,714 | 99,480 |
| Adelaide..... | 181,331 | 136,513 | 115,314 | 92,372 |
| West Australia..... | 118,905 | 51,350 | 1,459 | Nil |
| Brisbane..... | 313,837 | 275,141 | 246,376 | 182,542 |
| Tasmania..... | 34,366 | 32,989 | 22,016 | 22,921 |
| Commonwealth..... | 1,907,331 | 1,670,281 | 1,443,118 | 1,222,872 |
| New Zealand..... | 581,531 | 546,300 | 364,861 | 321,927 |
| Australasia..... | 2,488,862 | 2,216,581 | 1,807,979 | 1,544,799 |

| Centres. | 1913-14 | 1912-13 | 1911-12 | 1910-11 |
|---------------------|---------------|---------------|---------------|---------------|
| | <i>Bales.</i> | <i>Bales.</i> | <i>Bales.</i> | <i>Bales.</i> |
| Sydney..... | 775,443 | 664,482 | 773,991 | 784,309 |
| *Melbourne..... | 348,368 | 312,698 | 399,229 | 366,234 |
| Geelong..... | 115,013 | 107,315 | 128,990 | 110,933 |
| Adelaide..... | 141,642 | 147,983 | 147,375 | 145,049 |
| West Australia..... | 3,860 | 3,182 | 1,247 | 1,450 |
| Brisbane..... | 292,875 | 259,150 | 229,345 | 215,160 |
| Tasmania..... | 26,543 | 23,840 | 20,317 | 19,420 |
| Commonwealth..... | 1,703,744 | 1,518,650 | 1,700,494 | 1,642,555 |
| New Zealand..... | 264,834 | 286,151 | 226,432 | 222,612 |
| Australasia..... | 1,968,578 | 1,804,801 | 1,926,926 | 1,865,167 |

*Including Ballarat and Albury.

The following table shows the number of bales sold, their weight in pounds, the gross value, and the average value per bale for thirteen seasons:

AUSTRALASIAN SALES AND VALUES. (THIRTEEN SEASONS.)

| Season. | Sales. | Net Weight. | Average Net Weight. | Gross Value. | Average per Bale. | | |
|----------------|---------------|---------------|------------------------|--------------|----------------------|-----------|-----------|
| | <i>Bales.</i> | <i>Lbs.</i> | <i>Lbs. per Bale.</i> | <i>£</i> | <i>£</i> | <i>s.</i> | <i>d.</i> |
| 1921-1922..... | 2,694,139 | 881,553,793 | 327.2 | 41,504,090 | 15 | 8 | 1 |
| 1920-1921..... | 990,050 | 327,192,069 | 330.5 | 15,475,014 | 15 | 12 | 7 |
| 1919-1920..... | 2,626,005 | 852,022,484 | 324.4 | 59,819,005 | 22 | 15 | 7 |
| 1918-1919..... | 2,658,747 | 880,441,399 | 331.1 | 60,346,547 | 22 | 13 | 11 |
| 1917-1918..... | 2,488,862 | 824,611,893 | 331.3 | 55,806,998 | 22 | 8 | 5 |
| 1916-1917..... | 2,216,581 | 722,505,476 | 327.3 | 47,951,729 | 21 | 12 | 8 |
| 1915-1916..... | 1,807,979 | 580,234,830 | 322.7 | 29,903,532 | 16 | 10 | 10 |
| 1914-1915..... | 1,544,799 | 504,533,053 | 329.1 | 19,742,546 | 12 | 15 | 7 |
| 1913-1914..... | 1,968,578 | 639,769,519 | 327.2 | 26,079,536 | 13 | 4 | 11 |
| 1912-1913..... | 1,804,801 | 579,750,442 | 321.2 | 24,642,643 | 13 | 13 | 1 |
| 1911-1912..... | 1,926,926 | 638,197,891 | 331.2 | 22,682,090 | 11 | 15 | 5 |
| 1910-1911..... | 1,865,167 | 612,365,881 | 332.1 | 23,346,602 | 12 | 10 | 4 |
| 1909-1910..... | 1,889,745 | 634,009,448 | 335.5 | 25,712,774 | 13 | 12 | 2 |
| | 26,482,379 | 8,677,188,178 | 327.6 | 453,013,106 | 17 | 2 | 1 |

WOOL MANUFACTURE IN AUSTRALIA.

The *Review* states that there was marked expansion during the year in the wool manufacture in Australia; a dozen or more companies being in course of formation. During the season local manufacturers bought 169,165 bales of wool, compared with 106,552 bales the previous season, an increase of 62,613 bales. This development was along commercial lines and was independent of the scheme advocated by the director of the Federal Bureau of Commerce and Industry who several years ago urged wool growers to become manufacturers and proposed to turn all the wool produced into fabrics. A recent report of the Commonwealth's Bureau of Statistics states that there were in the season of 1921-22 nine mills in New South Wales employing 1650 hands, seventeen in Victoria employing 3342 hands, two in Queensland and two in South Australia employing 321 and 244 hands, respectively, and four in Tasmania employing 226, a total of 5783 for thirty-four mills.

THE RABBIT PEST.

Much complaint is made of the great numbers of rabbits overrunning sections of the country and consuming pasturage which but for them would support large bands of sheep and lambs. Some idea of their numbers may be gathered from the fact that up to December 1, 1922, 35,000,000 rabbit skins were sold in Australia during the preceding eleven months. These do not represent all the rabbits killed of which, it is stated by *Dalgety's Review* "hundreds of millions are overrunning the country and levying the greatest of all tolls upon the state's possible wealth of production." In the drier portions of the country where the rainfall was meager, there was a rabbit drought and 70 or 80 per cent of lambs were marked on properties freed of rabbits, while neighboring holdings well stocked with rabbits lost practically all their lambs. Where they are numerous, they clean up the young shoots, and the sheep must live by eating an excessive proportion of

dry food which brings disorders and death. The disastrous influence of the rabbits upon the sheep population is becoming more markedly detrimental with each passing year, and one serious problem which has been of great concern for many years to the flockmasters remains unsolved. After many experiments all of which have failed, it is thought that wire netting is the great front line of defence against the invaders, and the State Government has provided £250,000 for such netting for settlers on extended payment time for the protection of cultivation areas.

The following table shows the number of sheep in New Zealand on April 30 for a series of years from 1913 to 1922, inclusive, and the number of mutton and lamb carcasses exported:

NUMBER OF SHEEP IN NEW ZEALAND, AND EXPORTS OF MUTTON AND LAMB FOR PAST TEN YEARS AT APRIL 30.

| Year ended April 30 | Number of Sheep in New Zealand. | Mutton Carcasses Exported. | Lamb Carcasses Exported. |
|------------------------|---------------------------------------|----------------------------------|--------------------------------|
| 1913. | 24,191,810 | 2,133,226 | 3,181,991 |
| 1914. | 24,798,763 | 2,630,962 | 3,808,006 |
| 1915. | 24,901,421 | 2,392,213 | 3,456,597 |
| 1916. | 24,788,150 | 2,713,247 | 3,488,951 |
| 1917. | 25,270,386 | 2,613,259 | 2,883,350 |
| 1918. | 26,354,594 | 2,038,304 | 1,945,305 |
| 1919. | 25,828,554 | 1,211,536 | 988,747 |
| 1920. | 23,919,970 | 4,199,675 | 3,780,523 |
| 1921. | 23,285,031 | 5,659,292 | 4,327,397 |
| 1922. | 22,245,473* | 3,373,018 | 5,192,392 |

*Interim return.

THE END OF THE B. A. W. R. A.

THE organization of the British Australian Wool Realization Association was brought about so speedily in January, 1921 that many men in England interested in the marketing and manufacture of wool were not satisfied with the explanations given at the time, that the sole purpose of the Association was to dispose of the carry-over wool as promptly as market conditions would permit, suspecting that there was another and an ulterior motive in the minds of the men responsible for the organization. It will be recalled that after the British Government decided to terminate on June 30, 1920 its contract for the control of all Australian wools, that the proposals made by the Australian Government were as follows:

I. That the British Government should hand over to the Australians at the earliest possible moment half of the surplus assets of their section of the Wool Purchase Account consisting of about 900,000 bales of wool and a number of million pounds sterling, their half of the cost surplus over all liabilities of that account. Their proposal was to capitalize the assets at £25,000,000 and to form therewith a co-operative association of which the proprietors would be the entire sheep farming community of Australia.

II. They proposed that the British Government hand over to the Association so formed for sale on agency terms, the British half of the carry-over of Australian wool, also about 900,000 bales.

Sir Arthur Goldfinch wrote to the Bradford Chamber of Commerce in explanation of the scheme, in part, that "the proposals contain absolutely nothing which affects the normal course of business in either the Australian or the British wool markets." He assured the Chamber that "the new clip now coming forward in normal quantities, will in no way be subject to the Association, so that from Australia equally with all other wool producing countries the flow of wool into England may reasonably be expected to continue to the full extent of the requirements of the industry and the desire and ability of the trade to purchase the wool. No restriction and no preference of any kind is asked for by Australia." He emphasized the point that "the proposed arrangements only tie up in the hands of the Association the carry-over of Australian wool of the old clips which must be regarded to a very great extent as a supply over and above the normal, "the main object being the realization to the best advantage of the old clip wool."

While Sir Arthur Goldfinch was thus reassuring his English friends, Sir John Higgins, Chairman of the Australian Central Wool Committee, was making it plain to his supporters in Australia that the real purpose was not early to dispose of the surplus wools, but to control distribution and prices by marketing the hold-over wools in conjunction with the then current clip, the aim being to keep as much wool as possible in Australia and to dole it out to buyers in quantities in keeping with their capacity to consume. To bring about the desired control of Australian supplies, a proclamation under the customs law was issued by which the exports from the Commonwealth of wool purchased either at auction or by private treaty were made subject for six months to an undertaking that the reserve price was to be not less than an average of 8 d. per pound for an average clip.

Not content with the results accomplished and apparently loth to surrender offices carrying large salaries (directors' fees alone eating up over £30,000 annually), an effort was made last summer to prolong the life of the organization. At a wool conference held in Melbourne, August 29 and 30, Sir John Higgins proposed a scheme by which it was intended to contract the sale of Australian crossbred wool either by purchase or by cash advances to growers, provided the wool be handed over to the B. A. W. R. A. for disposal when and in such manner as should be decided by that Association. The details of the plan proposed were as follows:

1. That Bawra should purchase outright the whole of the Australian crossbred clip of 50 counts and under for the 1922-23 season, on the average prices ruling for respective types during, say, the last three months of the 1921-22 selling season, and to hold same off the market until the opening of the 1923-24 wool season, or such time as may be considered advisable.

2. Generally as per Proposal 1, but in place of a purchase outright for cash, advances to be made by Bawra to grower of 85 per cent based upon like valuations; the wool to be stored and held by Bawra and sold next season on account of the growers, who would carry all responsibilities as

to interest, storage, market, and other risks, and in turn secure all benefits, should values advance.

3. That Bawra fix certain limits for respective counts, appoint representatives to attend all sales throughout the Commonwealth, and bid up to such limits for the whole of the Australian crossbred wool clip of 50 counts and under submitted at auction. In other words, the buying limits for particular counts would become minimum reserves. Should bids exceed the reserves, business to proceed as usual; the profit or loss would be on account of Bawra.

4. That Bawra shall (a) determine and fix limits for respective counts based on the principal of Central Wool Committee's table of limits, and upon values ruling for the last three months of 1921-22 season, or as may be ultimately arranged; and (b) make cash payment 14 days after appraisal on the basis of such limits; and (c) should any profit result on resale of wool so acquired of the 1922-23 clip, the net profit to be equally divided between Bawra and the growers, and such profit to be distributed on a percentage basis to growers in relation to the appraised value of the wool; (d) the wool so acquired shall not be re-offered before July, 1923.

Later it developed that the Melbourne directorate of B. A. W. R. A. aimed to broaden the scope of the Association's operations and to establish it in perpetuity with the balance of the Association's assets, approximately £6,000,000 as capital.

The issue, whether or not the B. A. W. R. A. should be extended indefinitely and be turned into a central organization for the protection of Australian pastoral and agricultural industries, was fought out at a meeting held in Melbourne December 6, 1922 which was attended by approximately 800 stockholders. For an hour and a half Sir John Higgins, the chairman, addressed the gathering in support of the resolution whose adoption he urged. It was as follows:

That it is desirable to have a central organization for the protection and development of Australian pastoral and agricultural industries, including the formulation of policies respecting the disposal of primary products, or of such of them as may be decided upon by the meeting; that the British Australian Wool Realization Association, Limited, be such central organization, and that the directors thereof be, and they are hereby, authorized to take such steps as they consider necessary to carry this resolution into effect.

Dr. N. W. Kater, president of the Graziers Association of New South Wales, offered as an amendment that—

The words of the resolution after "That it is" be omitted and the following words substituted therefor: "In the best interests of the wool industry and of the company, that the main purpose of the company, viz, the realization of the wool and other assets of the company and the distribution of the proceeds amongst the stockholders should be carried into full and complete effect as soon as reasonably possible, and that thereupon the company should be wound up and dissolved, and it is resolved accordingly that the directors be, and they are hereby requested, to give effect to this resolution without undue delay.

The amendment was carried with only about fifteen or twenty of the eight hundred present voting against it. The chairman, Sir John Higgins, declared he accepted the amendment without any qualification, and Sir Arthur Goldfinch, director general and chairman of the London board, who says he personally is "very much pleased with the decision, though he feels they have made a mistake," has promised the Chancellor of the

Exchequer that the last of the British Government wool shall be sold by March 31, 1924, which means, if the promise is kept, that the Association must sell on an average 63,778 bales of wool each month.

B. A. W. R. A. was registered in Victoria on January 27, 1921. An agreement endorsed by the Commonwealth Government and approved by the British Government for the formation of the Association and for transfer of the Central Wool Committee assets to the new Association was signed at Melbourne April 1, 1921, the agreement under which the Association was to act as agent for the sale of carry-over wool and sheep skins owned by the British Government being signed in London on March 31, 1921.

The Association took over from the Central Wool Committee on behalf of Australian wool growers 918,002 bales of carry-over wool, representing investment of profits earned under that committee's control, and undertook to sell concurrently for the British Government its holdings of an equal quantity of Australian wool, as well as its 772,943 bales of New Zealand wool and 2,329 bales of Falkland Island wool. The total quantities are shown by the following table:

| | Bawra Wool | British Govt. Wool. |
|----------------------|---------------|---------------------------|
| | <i>Bales.</i> | <i>Bales.</i> |
| Australian: | | |
| Merino..... | 452,090 | 452,090 |
| Crossbred..... | 465,912 | 465,913 |
| New Zealand: | | |
| Merino..... | | 3,181 |
| Crossbred..... | | 769,762 |
| Falkland Island..... | | 2,329 |
| | 918,002 | 1,693,275 |

The stocks undisposed of on December 31, 1922 were 913,000 bales.

CANADA.

We are able this year through the courtesy of officials of the Dominion Government to print in the following table the estimated number of sheep and lambs in Canada by provinces, together with the production of sheep's wool and lambs' wool.

The weight of a sheep's fleece is placed at seven pounds and a lamb's at four pounds. The table is as follows:

ESTIMATED NUMBER OF SHEEP* IN CANADA BY PROVINCES
FOR THE YEARS 1918, 1919, 1920, 1921, 1922.

| | Prince Edward Island. | Nova Scotia. | New Brunswick. | Quebec. | Ontario. |
|-----------|-----------------------------|-----------------|-------------------|-----------|-----------|
| 1918..... | 73,046 | 259,847 | 140,015 | 959,070 | 972,341 |
| 1919..... | 114,955 | 261,529 | 212,745 | 1,007,425 | 1,101,740 |
| 1920..... | 128,529 | 403,567 | 280,090 | 1,031,982 | 1,129,084 |
| 1921..... | 131,763 | 324,260 | 236,951 | 1,006,620 | 1,081,828 |
| 1922..... | 105,703 | 329,345 | 236,031 | 990,918 | 986,617 |

| | Manitoba. | Saskatchewan. | Alberta. | British Columbia. | Total. |
|-----------|-----------|---------------|----------|----------------------|-----------|
| 1918..... | 136,782 | 134,177 | 332,179 | 45,291 | 3,052,748 |
| 1919..... | 167,170 | 146,911 | 364,498 | 44,985 | 3,421,958 |
| 1920..... | 156,716 | 160,918 | 383,424 | 46,473 | 3,720,783 |
| 1921..... | 131,361 | 188,021 | 523,599 | 51,457 | 3,675,860 |
| 1922..... | 111,964 | 191,937 | 260,366 | 49,745 | 3,262,626 |

*Includes lambs.

Commenting on the depression in 1920 and 1921 and the passage of the Emergency Tariff law on May 27, 1921, (with its duty of fifteen cents a pound on unskirted wool) and its serious effect on wool prices in Canada because about half of the Canadian wool clip had previously been exported to the United States, the editor of the *Monthly Bulletin of Agricultural Statistics* says that the Emergency Tariff law of this country "had had the effect of decreasing importation sufficiently to cause the utilization of the stocks on hand and in the United States prices rose to a point where exportation from Canada became possible in spite of the fifteen cents per pound tariff. When, therefore, the Canadian season of 1922 began, the market was a much better one than that of 1921. The improved prices for wool and the increased demand for lambs as evidenced by reports from various parts of Canada are having good effects upon the sheep industry, and the demand for breeding stocks indicates that for 1923 there should be no further decrease in the sheep population."

It is stated that great progress has been made during recent years in the co-operative grading and sale of wool, at present the wool graded and sold through the co-operative associations representing ten per cent of the wool production. In 1914 the quantity thus sold amounted to 206,129 pounds. It increased to 1,738,274 pounds in 1916 and to the maximum of 4,646,195 pounds in 1920. In 1922 the quantity fell to 1,918,002 pounds, the decrease being attributed to the strong demand by local buyers in the early months of the season which enabled them to operate successfully on a rising market.

The following table shows the quantity of wool sold by grade through the co-operative wool associations, together with the percentage each grade is of the total:

ANALYSIS OF WOOL GRADED IN YEARS 1916, 1920, 1922.

| Grade. | 1916. | | 1920. | | 1922. | |
|--------------------|-----------|------------------------|-----------|------------------------|-----------|------------------------|
| | Pounds. | % each grade of total. | Pounds. | % each grade of total. | Pounds. | % each grade of total. |
| Fine Combing.... | 129,536 | 7.45 | 33,650 | .72 | 25,099 | 1.31 |
| Fine Clothing.... | 90,559 | 5.21 | 150,470 | 3.24 | 12,783 | .66 |
| F. Med. Combing.. | 364,937 | 20.99 | 218,948 | 4.49 | 138,399 | 7.22 |
| F. Med. Clothing.. | 85,132 | 4.90 | 381,290 | 8.20 | 69,970 | 3.64 |
| Med. Combing... | 652,348 | 37.54 | 880,348 | 19.17 | 387,586 | 20.21 |
| Med. Clothing.... | 42,707 | 2.45 | 678,465 | 14.60 | 142,530 | 7.42 |
| L. Med. Combing.. | 176,191 | 10.14 | 1,035,617 | 22.31 | 645,109 | 33.67 |
| L. Med. Clothing.. | 1,399 | .08 | ..... | ..... | 11,107 | .57 |
| Low Combing.... | 22,257 | 1.28 | 453,533 | 9.77 | 259,055 | 13.51 |
| Low Clothing.... | 388 | .02 | ..... | ..... | 2,679 | .14 |
| Coarse..... | 53,079 | 3.06 | 193,928 | 4.17 | 98,916 | 5.16 |
| Washed..... | ..... | ..... | 3,813 | .08 | 12,753 | .66 |
| Mohair..... | ..... | ..... | 2,616 | .05 | 635 | .03 |
| Lustre..... | 36,265 | 2.08 | ..... | ..... | 5,456 | .28 |
| Rejects..... | 83,476 | 4.80 | 613,517 | 13.20 | 105,925 | 5.52 |
| Total..... | 1,738,274 | 100% | 4,646,195 | 100% | 1,918,002 | 100% |

GERMANY.

According to writers in German Agricultural periodicals, the economic condition of sheep rearing improved during the war. Most of the large farmers were obliged to turn to sheep to consume the supplies of forage which were too large to be consumed by the reduced number of cattle kept. The usual number of the latter could not be retained on account of the scarcity of labor, the great advance in wages, and the right of agricultural workers to strike. Although fewer shepherds were available, the number of sheep in Germany increased (within the frontiers of 1915) from 5,073,478 in 1915 to 8,921,620 in 1919.

To increase the number of sheep holdings by owners of small farms, it is urged that sheep grazing syndicates be formed quite generally on the lines of those which have sprung up in the provinces of Hanover and Brandenburg. There several proprietors unite to form a collective flock of from 200 to 300 sheep and employ a shepherd who is paid partly in money, or he may share in the profits, if any, or keep a certain number of sheep for himself. During the winter each owner takes back his sheep and the next spring a new flock is formed.

Syndicates with limited liability have been recently formed in Silesia whose object is the improvement and development of sheep breeding by the following means: (a) The engagement of a common shepherd; (b) The acquisition of good animals for breeding and especially of the service of a first class ram; (c) Enlargement of pasture lands by making and renting grazing grounds; (d) The collection and common use of the subsidies granted by Chambers of Agriculture or other agricultural corporations; (e) The co-operative sale of wool and other products.

In Germany, there is a marked tendency, it is stated, among breeders to raise dual purpose sheep, animals combining the highest possible wool yield with mutton production. A writer in the *Illustrated Agricultural Journal* puts into four classes the various breeds of value for the improvement of the German flocks:

(1) Silky merinos, producing (a) carding wool and wool for woolen stuffs; (b) combing wool, extra fine, fine, (AA-A).

(2) Early maturing merinos (merino mutton sheep) and Anglo merinos.

(3) Early maturing varieties-black-faced sheep of English origin and local breeds.

At present the greatest interest is being shown in the early maturing merinos and the local breeds, the latter being chiefly suited to the small or average farm where the owner takes up sheep breeding without having had experience in it. The former are valued because of their heavy fleeces, their long, soft (A. B.) combing wool, their early maturity, symmetry, thriftiness, and excellent constitution. The Dishley merinos and Meteschaf breeds are widely kept because of their early maturity and their fattening capacity, as are the Shropshires, Hampshires, Oxfords, and Suffolks.

The silky merinos are constantly declining and it is only in the provinces east of the Elbe that they form any considerable part of the total sheep numbers.

We have been unable to get reliable figures for the German wool consumption for comparable months before the war and since the armistice. We present below, however, a table compiled by the publisher of a German textile journal which gives the estimated wool consumption for the calendar year 1913 and for the fiscal year from May, 1921 to April, 1922, inclusive. It is on a scoured wool basis, the imports and exports of wool in the grease having been converted to give approximate figures for scoured wool. The table is as follows:

| ESTIMATED WOOL CONSUMPTION BY GERMANY FOR CALENDAR YEAR 1913, AND FOR FISCAL YEAR MAY, 1921 TO APRIL, 1922. | | | |
|--|---------------------------------|--|--|
| SCOURED BASIS. | | | |
| | 1913. (January to December). | 1921-1922. (May, 1921-April, 1922). | |
| Domestic production... | 17 636,800 pounds | 20,723,240 pounds | |
| Imports..... | 319,569,997 " | 273,381,423 " | |
| Total..... | 337,206,797 " | 294,104,663 " | |
| Exports..... | 105,465,859 " | 26,128,919 " | |
| Estimated Consump- tion..... | 231,740,938 " | 267,975,744 " | |

NUMBER OF SHEEP IN GERMANY, BY STATES, YEARS 1900 TO 1921.

| States. | 1900 | 1904. | 1907. | 1912. | 1913. | 1914. | 1915. | 1916. | 1917. | 1918. | 1919 | 1920 | 1921. |
|---------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Prussia..... | 7,001,518 | 5,660,529 | 5,408,867 | 4,111,929 | 3,832,909 | 3,735,485 | 505,657 | 3,387,272 | 3,346,797 | 3,617,465 | 3,521,143 | 4,017,766 | 3,867,860 |
| Bavaria..... | 760,428 | 680,099 | 735,113 | 475,661 | 491,871 | 516,321 | 455,803 | 486,015 | 519,677 | 608,620 | 616,236 | 741,483 | 686,213 |
| Saxony..... | 74,628 | 61,863 | 66,120 | 55,137 | 58,271 | 56,158 | 56,796 | 52,970 | 63,044 | 72,072 | 84,781 | 102,486 | 91,064 |
| Württemberg..... | 316,346 | 278,902 | 278,337 | 214,081 | 228,021 | 236,177 | 219,359 | 233,823 | 230,616 | 234,321 | 229,115 | 269,305 | 268,080 |
| Baden..... | 68,531 | 59,295 | 52,020 | 40,769 | 41,305 | 43,905 | 39,303 | 41,408 | 45,519 | 60,036 | 65,469 | 79,618 | 72,811 |
| Thuringia..... | 249,384 | 186,832 | 196,030 | 143,862 | 147,479 | 157,141 | 137,889 | 134,575 | 132,662 | 142,260 | 156,855 | 176,159 | 179,842 |
| Hessia..... | 81,596 | 58,158 | 64,643 | 48,124 | 53,838 | 58,146 | 50,882 | 49,683 | 58,971 | 61,786 | 72,042 | 87,215 | 77,943 |
| Hamburg..... | 2,753 | 2,273 | 3,068 | 2,376 | 2,970 | 2,429 | 2,800 | 2,500 | 1,575 | 2,312 | 2,771 | 3,978 | 4,131 |
| Mecklenburg-Schwerin..... | 529,181 | 426,348 | 412,599 | 331,399 | 293,489 | 294,148 | 268,821 | 264,689 | 247,560 | 256,538 | 276,074 | 312,570 | 307,091 |
| Oldenburg..... | 112,064 | 81,396 | 79,650 | 47,621 | 49,803 | 53,175 | 45,331 | 48,151 | 49,906 | 53,817 | 58,596 | 63,497 | 48,560 |
| Brunswick..... | 137,504 | 118,866 | 115,171 | 95,815 | 96,633 | 95,647 | 88,908 | 80,527 | 77,410 | 82,691 | 94,351 | 110,444 | 108,505 |
| Anhalt..... | 86,221 | 76,764 | 74,576 | 63,677 | 61,055 | 60,606 | 57,589 | 54,458 | 51,621 | 53,713 | 56,520 | 63,980 | 64,956 |
| Bremen..... | 679 | 310 | 410 | 357 | 485 | 403 | 267 | 469 | 455 | 943 | 1,271 | 1,271 | 1,098 |
| Lippe..... | 16,306 | 13,704 | 12,124 | 7,793 | 7,743 | 8,866 | 6,864 | 6,742 | 7,081 | 8,570 | 9,683 | 12,336 | 10,799 |
| Lubeck..... | 3,176 | 1,391 | 1,570 | 1,442 | 1,588 | 1,612 | 1,338 | 1,625 | 1,648 | 1,582 | 1,894 | 2,349 | 1,912 |
| Mecklenburg-Strelitz..... | 128,610 | 109,547 | 104,624 | 95,922 | 86,683 | 87,984 | 82,898 | 77,997 | 63,093 | 68,771 | 71,186 | 78,610 | 75,454 |
| Waldeck..... | 38,982 | 28,440 | 29,609 | 21,079 | 21,592 | 23,160 | 20,094 | 22,558 | 19,577 | 19,897 | 21,463 | 24,235 | 24,853 |
| Schaumburg-Lippe..... | 1,633 | 1,199 | 1,199 | 747 | 745 | 774 | 728 | 676 | 1,007 | 1,290 | 1,952 | 2,190 | 1,245 |
| Alsace-Lorraine..... | 82,961 | 61,266 | 67,980 | 45,654 | 44,357 | 39,331 | 32,151 | 33,050 | 35,493 | ..... | ..... | ..... | ..... |
| Totals..... | 9,692,501 | 7,907,173 | 7,703,710 | 5,803,445 | 5,520,837 | 5,471,468 | 5,073,478 | 4,979,128 | 4,953,772 | 5,346,084 | 5,373,402 | 6,149,492 | 5,892,417 |

SWEDEN.

The history of the Swedish wool industry is very old, Sweden being one of the first, if not the first country, to import Spanish merinos. Notwithstanding this early start, there are but few merinos in Sweden today, the sheep being mainly crossbreds, and, on the greater farms, of pure English blood like the Southdowns, Shropshires, etc.

The number of sheep in Sweden from 1865 to 1919 is given in the following table:

NUMBER* OF SHEEP IN SWEDEN 1865-1919.

| Year. | Lambs(a). | Total. | Year | Lambs(a). | Total. |
|-------------------|-----------|--------|--------------------|-----------|--------|
| 1865 Dec. 31..... | | 1,590 | 1905 Dec. 31.. | | 1,074 |
| 1870 " | | 1,595 | 1910 " .. | | 1 004 |
| 1875 " | | 1 609 | 1913-14 June 1 (b) | 543* | 1,205 |
| 1880 " | | 1,457 | 1915 " (b) | 528 | 1,146 |
| 1885 " | | 1,442 | 1916 " ... | 570 | 1,198 |
| 1890 " | | 1,351 | 1917 " ... | 637 | 1,344 |
| 1895 " | | 1,313 | 1918 " ... | 684 | 1,409 |
| 1900 " | | 1,261 | 1919 " ... | 740 | 1,564 |

*Three zeros omitted.

(a) Less than one year old.

(b) Calculated.

As a rule, the sheep are shorn twice a year, in March-April, and September-October. In some remote parts of the country, they are shorn even a third time at or immediately before Christmas. In recent years, the costs of shearing having grown higher, yearly shearing on the greater farms is sometimes reported, and a change in this direction may occur.

It is estimated that the total production of wool in Sweden during the last pre-war years amounted to about 5,000,000 pounds in the grease, this estimate being supported by a calculation of the quantity of Swedish wool spun in 1912, approximately 2,400,000 lbs. scoured weight.

The woolen industry of Sweden is mainly of two types; commission factories, specializing in commission spinning and weaving of Swedish wool for the farmers' account, and ordinary woolen mills, comprising the cloth-making factories of combined character, the machine-felt makers (especially for the requirements of the great paper industry), other felting makers, and some spinners of cotton and wool yarns.

Until recently there were no combing works in the worsted industry, and the spinning and weaving factories have been separated, the former specializing in hosiery yarns and the latter in ladies' stuffs. Although some combing works have been established, tops are still to a great extent bought from Bradford and other places.

Among the woolen mills two great enterprises may be mentioned: the Aktiebolaget Forenade Yllefabrikerna in Norrköping, and the Malmö Yllefabriksaktiebolag in Southern Sweden (each with some 25,000 spindles and about 800 looms). The Drags Aktiebolag in Norrköping is devoted to cloths of a very high quality. The worsted branch is mainly located in Gothenburg and Borås. There are also many both larger and smaller mills which together with the above named produce about 90 per cent of the

country's requirement of woollen and worsted cloths. The industry has fewer than 13,000 wage earners, eighteen per cent being employed in the worsted branch, twenty per cent in commission works for domestic wool, and sixty-two per cent in the ordinary woollen mills.

The worsted enterprises are growing and the commission factories diminishing in relative importance. The development of the industry in recent years is shown by the following tables:

THE DEVELOPMENT OF THE SWEDISH WOOL MANUFACTURE.

| | Number of Establishments (a) | | Wage- earners. | Spindles. | Looms. |
|-----------|------------------------------|----------|-------------------|-----------|--------|
| | Spinning. | Weaving. | | | |
| 1911..... | 113 | 87 | 11,600 | 230,000 | 5,500 |
| 1912..... | 114 | 88 | 11,400 | 240,000 | 5,300 |
| 1913..... | 107 | 91 | 11,700 | 236,000 | 5,000 |
| 1914..... | 105 | 87 | 11,300 | 236,000 | 5,000 |
| 1915..... | 105 | 88 | 11,100 | 229,000 | 4,500 |
| 1916..... | 104 | 85 | 10,900 | 237,000 | 4,200 |
| 1917..... | 84 | 76 | 10,800 | 232,000 | 3,600 |
| 1918..... | 82 | 72 | 9,100 | 198,000 | 2,700 |
| 1919..... | 100 | 60 | 9,300 | 224,000 | 3,400 |
| 1920..... | 86 | 78 | 10,700 | 241,000 | 4,000 |

(a) Places where spinning or weaving is performed, the combined factories being reckoned twice.

To get a view of the wool consumption, it is necessary to estimate the production of domestic wool. Using the same estimate as before and approximating the figures for years later than 1919, the following table is worked out.

ESTIMATED WOOL CONSUMPTION OF SWEDEN.*

| | Imports (a), less Exports. | Tops Grease Equivalent. | Domestic Wool Produced. | Total Con- sumed. |
|-----------|----------------------------------|-------------------------------|-------------------------------|-------------------------|
| 1911..... | 5.77 | 11.20 | 5.00 | 22.0 |
| 1912..... | 6.63 | 16.70 | 5.00 | 28.3 |
| 1913..... | 5.96 | 14.80 | 5.00 | 25.8 |
| 1914..... | 4.59 | 10.80 | 5.00 | 20.4 |
| 1915..... | 7.96 | 1.40 | 5.50 | 14.9 |
| 1916..... | 13.31 | 3.90 | 6.00 | 23.2 |
| 1917..... | 2.95 | | 6.50 | 9.5 |
| 1918..... | | | 7.00 | 7.0 |
| 1919..... | 15.34 | 5.00 | 7.80 | 28.1 |
| 1920..... | 8.63 | 5.10 | 7.00 | 20.7 |
| 1921..... | 7.12 | 5.70 | 6.00 | 18.8 |

It is seen from these figures that the war, whose effects may be continued for some years, had a revolutionary influence upon the wool manufacture. The most important of these effects appear to be the more direct purchasing of raw materials and the development of a combing industry. The industry has a great competitive asset in its vast supply of waterfalls, about 60 per cent of the mills having been electrified before the war.

(a) Chiefly unwashed wool.

* Quantities in million pounds, grease equivalent.

FRANCE.

In France, it is reported that the number of sheep has decreased more than fifty per cent during the last thirty years.

In 1890 the number was 21,658,000; in 1900, 20,180,000; in 1905, 17,783,000; in 1910, 17,111,000; in 1913, 16,131,000.

The total number in France on December 31 of each year from 1914 to 1921, inclusive, was as follows:

| Year. | Numbers. | Year | Numbers. |
|-----------|------------|-----------|-----------|
| 1914..... | 14,038,860 | 1918..... | 9,061,110 |
| 1915..... | 12,261,780 | 1919..... | 8,990,990 |
| 1916..... | 10,854,280 | 1920..... | 9,376,630 |
| 1917..... | 9,881,870 | 1921..... | 9,599,560 |

The total number of sheep in the devastated regions and lost during the war was approximately 800,000. Up to December 31, 1921, the number restored by Germany under the treaty of peace was 139,170. It is estimated that the losses in the various sections of France, directly attributed to the war, were at least 6,000,000 sheep. Since 1919, however, the number has been steadily rising.

FINLAND.

Owing to the scarcity of wool in Finland during the war, more attention has been recently paid to sheep raising and wool growing, a special association, supported in part by the Government and in part by industrial magnates, having been organized.

The number of sheep, not including lambs, is shown for a series of years by the following table.

NUMBER OF SHEEP IN FINLAND.

| Year. | No. of Sheep. | Year. | *Lambs. | No. of Sheep. |
|-----------|---------------|----------|---------|---------------|
| 1875..... | 1,010,914 | 1910.... | 543,272 | 786,420 |
| 1885..... | 978,149 | 1914.... | | 751,500 |
| 1895..... | 1,067,387 | 1916.... | | 493,203 |
| 1905..... | 937,565 | 1917.... | | 524,034 |
| 1907..... | 904,447 | 1920.... | 666,000 | 1,037,000 |

* Figures for lambs are available for only the two years, 1910 and 1920.

POLAND.

In Poland, sheep suffered from the ravages of war more heavily than any other class of animals. The July 1922 statement of economic conditions gives the number of sheep as 2,178,216 as compared with 4,277,100 in 1910.

The greatest numbers are found in Prussian Poland in the provinces of Posen and Pomerania and in the eastern districts, bordering on the Russian frontier.

The wool textile manufacture is centered in Lodz, Biala, Bielsk and Bialystok in the order of importance named. The figures of the Union

of Polish Textile Industries, in which all but a few minor mills are represented, showed that on July 1, 1922 there were 41 active mills.

YUGOSLAVIA.

According to the official figures the number of sheep in the Kingdom in 1922 was as given by states in the annexed table.

NUMBER OF SHEEP.

| | |
|-----------------------------|-----------|
| Serbia (North)..... | 2,533,610 |
| Serbia (South)..... | 1,792,002 |
| Croatia | 556,023 |
| Bosnia and Herzegovina..... | 1,600,818 |
| Voivodina..... | 727,422 |
| Slovenia..... | 69,453 |
| Dalmatia..... | 823,784 |
| Montenegro..... | 358,392 |

| | |
|-------------|-----------|
| Total | 8,461,504 |
|-------------|-----------|

Of the total, 2,570,980 are stated to be lambs (up to one year old).

There are only six principal wool manufactories in the country, with 15,000 spindles and 300 looms, whose products are used almost wholly to equip the army. In addition, there are two large carpet mills and two which make woolen hats.

ROUMANIA.

The number of sheep in the principal sub-divisions of Roumania in 1920 is shown by the following table compiled from the livestock census of that year.

NUMBER OF SHEEP IN ROUMANIA BY SUB-DIVISIONS.

| Provinces. | No. of Sheep. |
|-------------------|---------------|
| Old Kingdom..... | 3,953,112 |
| Transylvania..... | 2,842,479 |
| Besserabia..... | 1,775,505 |
| Bucovina..... | 118,900 |

| | |
|------------------|-----------|
| Total, 1920..... | 8,689,996 |
|------------------|-----------|

SWITZERLAND.

The number of sheep, including lambs, in Switzerland for a series of years including 1921 is shown by the following figures taken from the annual publication of the *Schweizerischer, Handels and Industrie-Verein*.

NUMBER OF SHEEP AND LAMBS IN SWITZERLAND BY DECADES, 1866-1921.

| Year. | No. of Sheep. | Year. | No. of Sheep. |
|-----------|---------------|-----------|---------------|
| 1866..... | 447,001 | 1906..... | 209,997 |
| 1876..... | 367,549 | 1916..... | 172,938 |
| 1886..... | 341,804 | 1920..... | 240,553 |
| 1896..... | 271,901 | 1921..... | 244,435 |

BRITISH SOUTH AFRICA.

Through the courtesy of high officials of the Union of South Africa, we have received authentic information concerning the number of sheep, Angora goats, and other goats in that country as shown by the census of June 30, 1922, together with the official figures for exports of wool in the grease, scoured wool, and mohair. Practically all of each season's clip is exported by the end of the year, so that the quantity exported is approximately the production.

There are a few small woolen mills in the Union, but they consume a comparatively small quantity of wool. Wool scouring establishments, located near the coast treat a considerable quantity of wool as may be seen from the amounts exported.

The provisions of our new tariff law are favorable for the importation of South African wool, and it is altogether likely that a marked increase in imports from that country, which were almost prohibited by the terms of the Emergency Tariff law in force for nearly nine months of last year, will occur in 1923. As the Chief of the Division of Sheep and Wool says, "Farmers in this country are now paying a great deal of attention to the improvement of stock and the quality of the wool through judiciously classing and mating the sheep." The flocks have been much improved and there seems to be a basis for the hope of a greater production of merino wools in the near future.

The number of sheep and goats in the Union according to the census taken on June 30, 1922 was as follows:

NUMBER OF SHEEP AND GOATS IN UNION OF SOUTH
AFRICA ON JUNE 30, 1922.

| | |
|-----------------------|------------------|
| Wooled Sheep..... | 29,343,675 |
| Non-Wooled Sheep..... | 5,748,305 |
| Angora Goats..... | 2,515,232 |
| Other Goats..... | 6,445,722 |
| Total..... | <hr/> 44,052,934 |

The exports from South Africa of scoured wool, wool in the grease, and mohair for the fiscal year ended June 30, 1922, were as follows:

EXPORTS FROM THE UNION OF SOUTH AFRICA OF GREASE AND SCOURED
WOOL AND MOHAIR IN FISCAL YEAR ENDED JUNE 30, 1922.

| Countries. | Grease Wool. | Scoured Wool. | Mohair. | Sheep Skins. |
|-------------------------------|-----------------|------------------|----------------|-----------------|
| | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i> |
| United Kingdom..... | 124,134,051 | 8,379,573 | 16,072,213 | 12,894,684 |
| Germany..... | 59,615,270 | 2,016,945 | 17,956 | 677,232 |
| Belgium..... | 35,496,733 | 1,865,271 | 4,196 | 109,798 |
| France..... | 27,657,878 | 215,707 | 19,879 | 10,583,005 |
| Japan..... | 6,797,422 | 106,843 | | 241 |
| United States of America.... | 5,436,015 | 1,764,177 | 994,786 | 3,404,227 |
| Italy..... | 3,740,890 | | | 8,011 |
| Holland..... | 1,885,415 | 55,111 | 11,735 | 272,138 |
| Sweden..... | 45,817 | 10,771 | | |
| Russia..... | 9,184 | | | |
| S. W. Africa Protectorate.... | 7,100 | | 7,150 | |
| Canada..... | 4,789 | 115,457 | | |
| Denmark..... | | | | 420 |
| Australia, Commonwealth of | | | | 66 |
| Total..... | 264,830,564 | 14,529,855 | 17,127,915 | 27,949,822 |

It will be observed that Japan's imports of wool in the grease were larger than those of the United States, which were restricted by the excessive duties of the Emergency Tariff law.

JAPAN.

We are pleased to present for the first time authoritative figures showing the number of sheep in Japan for each year from 1909 to 1919, inclusive. They come from the 36th Census of the Japanese Department of Agriculture and Commerce. As the figures are for the end of the year, they evidently include the year's lambs.

NUMBER OF SHEEP IN JAPAN BY YEARS 1909-1919, INCLUSIVE.

| Year. | No. of Sheep. | Year. | No. of Sheep. |
|-----------|---------------|-----------|---------------|
| 1909..... | 3,411 | 1914..... | 2,771 |
| 1910..... | 3,357 | 1915..... | 2,768 |
| 1911..... | 3,736 | 1916..... | 3,370 |
| 1912..... | 3,308 | 1917..... | 3,192 |
| 1913..... | 2,946 | 1918..... | 4,546 |
| | | 1919..... | 5,098 |

Owing to the limited amount of pasturage and other difficulties in that country, it does not seem possible that the number of sheep to be accommodated in the island can be greatly increased. The most promising place for expansion lies on the Continent of Asia in the lands which Japan controls or over which she exercises a dominating influence.

Dr. Issa Tanimura, the Emperor's representative, who first visited this country in 1910 searching for plants and grasses to furnish forage for the planned-for flocks, is no longer in charge of the work, having been succeeded by W. Nagasaki.

Because of the limited amount of wool—not exceeding 30,000 pounds—produced in Japan, most of the supply has to be imported. Prior to 1913, the bulk of these imports came from Australia, but during the war, after Great Britain took over the Australian wools, Japanese manufacturers turned to South Africa and South America to meet their needs.

Japan's wool manufacture is expanding much more rapidly than her wool growing experiment, and her buyers are extending their operations into many foreign markets. Inasmuch as her production is a comparatively small amount, the consumption of her mills is approximately her annual imports of wool. The following table based upon official figures shows the imports of wool, goat, and camel hair for the years 1919, 1920, and 1921, and eight months of 1922.

| | WOOL. | | | | GOAT AND CAMEL HAIR. | |
|-------------------|-----------|------------|-----------|-------------|-------------------------|---------|
| | Quantity. | | Quantity. | | Quantity. | |
| | Tops. | | Others. | | Kin.† | |
| | Picul.* | Yen. | Picul. | Yen. | | Yen. |
| 1919..... | 32,398 | 13,736,959 | 385,326 | 47,567,286 | 641,257 | 792,936 |
| 1920..... | 28,608 | 15,126,084 | 533,512 | 106,503,374 | 304,371 | 353,247 |
| 1921..... | 41,376 | 12,655,034 | 225,957 | 19,547,619 | 302,474 | 208,959 |
| 1922 (8 Mo.)..... | 38,124 | 9,770,994 | 398,827 | 29,832,673 | 402,099 | 393,971 |

* 1picul equals 133.3 pounds avoirdupois.

† 1kin equals 1.3227 pounds avoirdupois.

The growth of the wool manufacture may be seen from the figures taken from official reports which give the number of mills, the power and hand looms, and the number of wage earners for the years from 1915 to 1920, inclusive. They are as follows:

| | No. of Mills. | No. of Power Looms. | No. of hands Looms. | No. of Laborers. |
|-----------|------------------|------------------------|------------------------|---------------------|
| 1915..... | 339 | 7,136 | 2,997 | 19,965 |
| 1916..... | 289 | 6,854 | 3,393 | 18,851 |
| 1917..... | 570 | 5,965 | 4,515 | 21,623 |
| 1918..... | 541 | 6,732 | 5,018 | 26,364 |
| 1919..... | 574 | 7,085 | 6,252 | 27,990 |
| 1920..... | 567 | 8,644 | 5,679 | 27,109 |

The production of the Japanese mills covering the years from 1916 to 1920, inclusive, was as follows:

JAPANESE PRODUCTION OF WOOL TISSUE AND MIXTURES BY YEARS,
1916-1920, INCLUSIVE.

| | MUSLIN. | | FLANNEL. | | SERGE. | |
|-----------|------------|------------|-----------|-----------|------------|------------|
| | Yards. | Value. | Pieces. | Value. | Pieces. | Value. |
| | | Yen* | | Yen. | | Yen. |
| 1916..... | 43,548,020 | 19,310,391 | 1,627,302 | 1,920,273 | 6,171,353 | 6,406,382 |
| 1917..... | 45,812,169 | 19,187,838 | 1,154,014 | 728,278 | 9,477,455 | 10,882,801 |
| 1918..... | 45,830,100 | 32,880,139 | 970,514 | 1,448,621 | 12,023,007 | 19,023,754 |
| 1919..... | 41,562,925 | 34,974,119 | 3,104,201 | 4,294,609 | 26,955,286 | 44,930,916 |
| 1920..... | 53,264,504 | 52,008,508 | 2,247,117 | 4,862,928 | 10,531,369 | 25,395,044 |

| | BLANKETS. | | WOOL CLOTH. | | OTHERS. | TOTAL. |
|-----------|-----------|-------------|-------------|-------------|-------------|-------------|
| | Kin.† | Value. | Yards. | Value. | Value. | Value. |
| | | <i>Yen.</i> | | <i>Yen.</i> | <i>Yen.</i> | <i>Yen.</i> |
| 1916..... | 392,971 | 3,426,649 | 6,927,680 | 16,656,493 | 3,681,316 | 51,401,504 |
| 1917..... | 1,236,456 | 1,367,862 | 4,148,534 | 8,333,561 | 3,521,950 | 44,022,300 |
| 1918..... | 1,040,333 | 3,065,017 | 7,648,292 | 21,486,559 | 8,034,230 | 85,938,320 |
| 1919..... | 1,426,231 | 3,861,558 | 7,428,095 | 26,070,725 | 15,242,385 | 129,374,312 |
| 1920..... | 1,055,090 | 3,193,814 | 6,687,837 | 30,777,745 | 44,900,348 | 161,238,387 |

*Yen equals 49c.

†1Kin equals 1.3227 pounds avoirdupois.

Her imports of wool, tops, and yarn from 1909 to 1921, inclusive, are shown in the annexed table.

JAPAN'S IMPORTS OF WOOL TOPS, AND YARN FROM 1909 TO 1921.

| Year. | Wool. <i>Pounds.</i> | Tops. <i>Pounds.</i> | Yarn. <i>Pounds.</i> |
|----------------------------|-------------------------|-------------------------|-------------------------|
| 1909-13 (5 yr. aver.)..... | 10,023,929 | 7,698,102 | 5,177,436 |
| 1914..... | 12,535,543 | 8,131,369 | 3,137,388 |
| 1915..... | 52,118,145 | 5,141,439 | 317,228 |
| 1916..... | 40,546,296 | 5,930,778 | 865,597 |
| 1917..... | 46,697,882 | 5,721,377 | 374,608 |
| 1918..... | 47,996,445 | 3,370,815 | 74,604 |
| 1919..... | 50,969,767 | 4,285,510 | 146,863 |
| 1920..... | 70,571,367 | 3,784,180 | 1,551,363 |
| 1921..... | 29,888,914 | 5,473,093 | 4,600,275 |

Commenting on the British export trade, a writer of an article in the August number of *The Journal of the Bradford Chamber of Commerce* cited as the most remarkable feature of the whole export trade "the continuance of the enormous shipments of woollen tissue to Japan", that country having taken in the first half of the year 10,864,000 square yards, and in the same period 3,610,000 square yards of worsteds.

Wool manufacture, the most recently undertaken of the Japanese textile industries, was scarcely beyond the experimental state at the outbreak of the war in 1914; but so rapid was its development under the stimulus of necessity, that at the present time it supplies a large proportion of the domestic requirements and also produces cloth for export. Until recently the trade consisted largely of inferior and coarsely woven materials, but responding to the demand for finer fabrics, the Japanese manufacturers are turning their attention to the production of finer wool cloths to meet a large demand caused by a change in women's fashions in Japan, which calls for kimonos made from fine wool instead of silk. Made of such wool the garment is said to be of gossamer like texture, quite as light as silk, and much more serviceable. The new kimonos are quite the fashion and the manufacturers are finding it difficult to fill all orders offered. *Dalgety's Review* says that "Japan has taken about 195,000 bales of our Australian wool this season, of which a large proportion on account of the new fashion, has been high-costing fine merino."

Exports from Japan of the principal kinds of wool manufactures from 1913 to 1921, inclusive, may be seen from the following table:

PRINCIPAL CLASSES OF WOOLEN AND WORSTED GOODS EXPORTED FROM
JAPAN 1913-1921.

| Class of Manufacture. | Unit. | 1913. | 1914-18. (5-yr. av.) | 1919. | 1920. | 1921. |
|---|-------|---------|-------------------------|-----------|-----------|---------|
| Woolen or worsted yarns..... | lb. | 152,593 | 549,800 | 529,070 | 341,410 | 189,950 |
| Mousseline de laine | yd. | 759,996 | 4,605,916 | 3,816,955 | 2,121,502 | 480,349 |
| Woolen cloths and serges..... | yd. | 141,907 | 2,372,601 | 1,342,520 | 462,373 | 321,878 |
| Blankets and blanketing of wool or of wooland cotton.. | lb. | 19,703 | 943,118 | 1,197,116 | 614,650 | 383,603 |

CHINA.

In last year's Review, we published a table showing the number of sheep in China by provinces, the total being given at 25,950,981, which were, we have learned, the figures as of 1915. Since the publication of those figures, which were the best then obtainable, the Chinese Ministry of Agriculture issued in April 1922, an estimate made by its experts of the number of sheep in the country. The total given by them is 45,000,000, an increase of 19,049,019, over the figures of 1915. This difference may be accounted for by the omission from last year's table of Thibet, which is a good pastoral country, and Mongolia and Chinese Turkestan, all of which were considered in this latest estimate by the Chinese experts.

The fluctuation of the imports of wool into the United States from China, as the country of production, for the past nine fiscal years ended June 30 of each year, are shown by the following table compiled from figures in the *Monthly Summary* issued by the United States Department of Commerce.

Up until the past year the exports of wool other than carpet wools from China as the country of origin, was increasing almost steadily. For the fiscal year of 1922 the Emergency Tariff law retarded their importation and increased the imports of Carpet, or Class III, wools. The Chinese Government is taking effective steps to improve the country's cattle, horses, and sheep, and steady progress would be made could the revolutionary warring factions be subdued and a stable government be established. Owing to the working of the Emergency Tariff law, the imports of carpet wools were the largest of the nine years covered in the table. The figures in detail are as follows:

IMPORTS OF WOOL INTO THE UNITED STATES FROM CHINA AS THE
COUNTRY OF PRODUCTION, FISCAL YEARS 1914-1922.

| Year. | Class I. | Class II. | Mohair. | Class III. | Total. |
|-----------|------------|-----------|---------|------------|------------|
| 1914..... | 109,667 | | 6,739 | 30,961,452 | 31,077,858 |
| 1915..... | 563,848 | 28,448 | 150 | 36,125,308 | 36,717,316 |
| 1916..... | 1,221,057 | 345,010 | 340,677 | 45,508,723 | 47,415,467 |
| 1917..... | 4,439,304 | 173,255 | 454,209 | 25,398,667 | 30,465,435 |
| 1918..... | 2,677,738 | 149,850 | 22,489 | 24,029,667 | 26,879,744 |
| 1919..... | 10,205,327 | 464,586 | 349,237 | 29,224,093 | 40,243,243 |
| 1920..... | 5,560,917 | 2,081,026 | 486,274 | 4,033,447 | 12,161,664 |
| 1921..... | 8,928,284 | 1,689,335 | 183,615 | 15,210,932 | 26,012,166 |
| 1922..... | 141,847 | 687,746 | 340,114 | 67,285,445 | 68,455,152 |

Reporting to the Federal Minister of Trade on an official visit to China, the Australian Senator who made the investigation is quoted in *Dalgety's Review* as having written:

"Very great possibilities present themselves in connection with the development of the woolen industry. A Chinese directing a trading concern with a seven million dollar capital, told me that his firm sold several thousand dollars' worth of blankets every day made almost entirely from Australian wool, which were mostly sold in Southern China. *** I see only one limit to the possibilities of trade with China. **** If Australia does not establish the textile industry on a large enough scale to provide for an export trade in woolen goods, I feel that the Chinese will establish mills in China for the manufacture of goods from Australian wool just as they are establishing and have established mills with a big installation of machinery to produce textiles from cotton."*****

There are three openings in favor of Australia in any fine wool textile development in China. If China manufactures for its domestic requirements, Australia is sure to be drawn upon for wool supplies, and Chinese representatives in the wool sale-rooms at Sydney, Brisbane, Melbourne and other interstate markets are likely to be as welcome and as prominent as the Japanese. If Japan secures the lion's share of the increased trade in wool textiles for China, larger purchases of wool will be made by Japan in Australia, for it can not greatly increase wool growing within its own confines. If Australian mills are able to open up a trade in blankets, and study Chinese requirements in lighter fabrics, it would mean the whole of the wool being Australian grown. A change may not be immediately effected, but developments on the foregoing lines may be looked for in the near future. Australians are pushing trade more systematically than heretofore, and China, with wool and woollens can not very well be left out of the reckoning.

CHILE.

Sheep raising can be successfully carried on in practically every province of the country, the central zone from Coquimbo as far south as the Bio Bio River, being well adapted to the industry, and in the Territory of Magellan where the climate is cold and snows frequent, sheep-raising is the chief source of wealth.

The following table shows the number of sheep in Chile by provinces in 1919, the latest available figures.

NUMBER OF SHEEP IN CHILE BY PROVINCES.

| Provinces. | No of Sheep. | Provinces. | No. of Sheep. |
|------------------|-----------------|--------------------------|------------------|
| Tacna..... | 17,845 | Maule..... | 145,960 |
| Tarapaca..... | 10,411 | Linares..... | 122,991 |
| Antofagosta..... | 6,149 | Nuble..... | 221,335 |
| Atacoma..... | 31,195 | Concepcion..... | 74,516 |
| Coquimbo..... | 184,311 | Arauco..... | 46,101 |
| Aconeagua..... | 98,763 | Bio-Bio..... | 138,513 |
| Valparaiso..... | 60,446 | Malleco..... | 124,597 |
| Santiago..... | 254,080 | Cautin..... | 100,598 |
| O'Higgins..... | 32,797 | Valdivia..... | 163,050 |
| Colchagua..... | 185,152 | Llanquhue..... | 148,610 |
| Curico..... | 255,793 | Chalos..... | 83,540 |
| Talca..... | 173,099 | Territory of Magelanes.. | 1,820,338 |
| | | Total, | 4,500,190 |

It is estimated that there are approximately 43,247,710 acres of un-irrigated land adapted to the raising of sheep, and it is probable that the number will be increased to supply the raw material for the country's wool manufacture and the domestic as well as foreign markets, with meat. In 1920 the Territory of Magellan exported frozen meat valued at \$5,306,782 and wool valued at \$11,247,838, of which \$5,180,752 worth came to the United States and \$4,695,422 worth went to Great Britain. The estimated wool production of Chile in 1919 was 37,339,530 pounds.

THE RIVER PLATE.

The quantity of wool produced in Argentina and the number of sheep in that country are moot questions. According to official census figures there were in June, 1917, only 45,000,000 sheep, not including lambs, in Argentina, to which if the lambs of the next season be added the total flock would amount to 60,000,000 head at least. In December, 1913, the sheep and lambs of the country were estimated to number 81,485,000. If the census figures are correct, the statistics of the exports of wool do not indicate so great a reduction in the flocks, unless the average weight of the fleeces has increased markedly. For the nine seasons ended September 30, 1922, the exports of Argentine wools were as follows:

| | Bales. | | Bales. |
|--------------|---------|--------------|---------|
| 1913-14..... | 305,606 | 1918-19..... | 283,066 |
| 1914-15..... | 304,517 | 1919-20..... | 305,524 |
| 1915-16..... | 299,207 | 1920-21..... | 301,322 |
| 1916-17..... | 348,226 | 1921-22..... | 474,776 |
| 1917-18..... | 288,051 | | |

an average of 323,366 bales per annum. This is larger than the number of bales exported in the season 1914-1915. It appears, therefore, that the production of Argentina has not decreased in anything like the proportion that the sheep figures quoted would indicate.

The imports of these wools into the United States for a series of years are given in the following tables. In recent years there was a great increase in imports of wool from these countries, but in the fiscal year 1922, the decrease noticeable the two previous years continued. The past year showed a noticeable reduction in our imports from Argentina, 10,725 bales from the preceding fiscal year, which were smaller than for any season since 1913. This was due to the Emergency Tariff rates. At the same time the imports from Uruguay showed a loss, although the total is exceeded by only three of the past twelve years.

This year it has been impossible to get satisfactory and reliable figures for the number of sheep in Argentina or the wool production. A number of estimates have been issued to show heavy decreases in sheep numbers and consequently in production; but these estimates seem to exaggerate the numbers lost by slaughter.

One of the best known and most reliable firms dealing in Argentina wool said in its monthly circular for May, that a belated return of the live stock census as of June 1, 1920 placed the total number of sheep in the Province of Buenos Aires at 21,576,428, an increase of 3,050,000 as compared with the number in 1916.

In 1908 the total number of sheep in Argentina was given at 67,000,000, approximately half of that number being in the Province of Buenos Aires. Between 1908 and 1916 the sheep in that province decreased 16,000,000, while cattle increased during the same period by ten per cent, or approximately 1,035,000.

The census of 1920 shows that a recovery of 3,000,000 sheep was made during the four years between 1916 and 1920, although the 1920 numbers were 13,000,000 below those for 1908. "Beyond these specific official data," the circular says, "which are only of relative value, the rest is guess work. Wool clips have overlapped. The average for the past three years would appear to be 140,000,000 kilos, but an average does not reveal the precise quantity clipped last year. Taking ten per cent of the whole parcel as lamb's wool, and estimating the average sheep fleece at 2 1-2 kilos and the average lamb's fleece at 900 grammes, a parcel of 140,000,000 kilos represents a return from 50,400,000 sheep and 14,400,000 lambs, being a total of 64,800,000 head. This figure is largely in excess of other estimates that have appeared in the local press. There is equal divergence as to the total number of sheep and lambs slaughtered annually for local consumption and export, but the positive statistics as to the export of sheep and lamb carcasses seem to authorize the calculation that the total sheep stock of the Republic has not dropped below fifty millions."

IMPORTS OF ARGENTINE WOOLS INTO THE UNITED STATES FOR THE YEARS 1911-1922, INCLUSIVE.

| Fiscal Year. | Class I. | Class II. | Class III. | Total. |
|--------------|----------------|----------------|----------------|----------------|
| | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i> |
| 1911..... | 14,014,295 | 96,326 | 3,780,755 | 17,891,376 |
| 1912..... | 23,049,591 | ..... | 4,572,037 | 27,621,628 |
| 1913..... | 24,393,428 | ..... | 2,349,156 | 26,742,584 |
| 1914..... | 36,301,837 | 396,980 | 5,577,725 | 42,276,542 |
| 1915..... | 67,076,718 | 90,212 | 10,641,323 | 77,808,041 |
| 1916..... | 111,253,529 | 3,239,552 | 14,670,272 | 129,163,353 |
| 1917..... | 185,446,149 | 7,769,359 | 14,754,584 | 207,970,092 |
| 1918..... | 162,046,754 | 3,838,542 | 15,269,279 | 181,154,575 |
| 1919..... | 121,579,497 | 1,181,355 | 16,690,943 | 139,451,795 |
| 1920..... | 129,770,054 | 2,348,288 | 7,107,578 | 134,225,920 |
| 1921..... | 91,875,734 | 6,148,440 | 5,998,943 | 104,023,117 |
| 1922..... | 6,002,098 | 13,930,624 | 12,354,133 | 32,286,855 |

IMPORTS OF RIVER PLATE WOOLS (IN BALES¹) INTO THE UNITED STATES FOR PAST TWELVE SEASONS, OCTOBER 1 TO SEPTEMBER 30.

| Seasons. | Argentina. | Uruguay. | Total. |
|--------------|------------|----------|---------|
| 1910-11..... | 18,565 | 718 | 19,283 |
| 1911-12..... | 32,396 | 5,062 | 37,458 |
| 1912-13..... | 25,876 | 2,766 | 28,642 |
| 1913-14..... | 34,779 | 10,522 | 45,301 |
| 1914-15..... | 103,070 | 15,157 | 118,227 |
| 1915-16..... | 152,330 | 10,080 | 162,410 |
| 1916-17..... | 225,467 | 46,078 | 241,545 |
| 1917-18..... | 209,528 | 17,139 | 226,667 |
| 1918-19..... | 132,866 | 61,875 | 194,741 |
| 1919-20..... | 75,944 | 38,003 | 113,947 |
| 1920-21..... | 85,788 | 35,886 | 111,674 |
| 1921-22..... | 43,451 | 25,161 | 68,612 |

¹The average weight of the bale is about 420 kilos. A kilo equals 2.2046 pounds.

ARGENTINA WOOL SHIPMENTS (IN BALES¹) TO OVERSEAS DESTINATIONS FOR TWELVE SEASONS, OCTOBER 1 TO SEPTEMBER 30.

| Seasons | Dunkirk. | Antwerp. | Hamburg. Bremen. | Italy. | United Kingdom. | United States. | Bordeaux. Marseilles. | Havre. | Holland. | Barcelona. | Various. | Total. |
|----------|----------|----------|---------------------|--------|--------------------|-------------------|--------------------------|--------|----------|------------|----------|---------|
| 1910-11. | 133,768 | 41,713 | 102,926 | 4,034 | 59,276 | 18,565 | 3,348 | 2,611 | 3,929 | ..... | 12,833 | 383,003 |
| 1911-12. | 91,655 | 40,121 | 121,480 | 6,065 | 46,871 | 32,396 | 1,895 | 2,291 | 2,391 | ..... | 6,795 | 355,438 |
| 1912-13. | 64,765 | 30,668 | 103,257 | 6,093 | 63,274 | 25,876 | 980 | 4,287 | 2,637 | ..... | 3,734 | 310,933 |
| 1913-14. | 72,551 | 36,723 | 85,193 | 6,120 | 43,255 | 34,779 | 1,940 | 7,384 | 2,678 | ..... | 8,102 | 305,606 |
| 1914-15. | 100 | ..... | ..... | 47,672 | 77,319 | 103,070 | 45,737 | 1,793 | 9,637 | ..... | 19,187 | 304,517 |
| 1915-16. | 1 | ..... | ..... | 41,491 | 32,098 | 152,330 | 21,782 | 11,501 | 11,697 | ..... | 28,307 | 299,207 |
| 1916-17. | ..... | ..... | ..... | 32,286 | 33,988 | 225,467 | 27,928 | 9,577 | 7,517 | ..... | 12,859 | 349,622 |
| 1917-18. | ..... | ..... | ..... | 21,835 | 6,226 | 209,528 | 13,109 | 10,725 | 150 | ..... | 26,478 | 288,051 |
| 1918-19. | 23,687 | ..... | ..... | 16,821 | 23,740 | 132,866 | 14,391 | 28,877 | 12,093 | ..... | 20,917 | 283,066 |
| 1919-20. | 71,997 | 42,044 | 26,777 | 19,222 | 44,266 | 75,944 | 1,311 | 3,731 | 2,828 | ..... | 7,404 | 305,524 |
| 1920-21. | 36,330 | 22,230 | 98,287 | 3,815 | 45,070 | 85,788 | 1,340 | 1,185 | 978 | 298 | 6,001 | 301,322 |
| 1921-22. | 104,462 | 49,707 | 155,774 | 23,613 | 83,691 | 43,451 | 1,594 | 2,600 | 616 | 1,737 | 7,531 | 474,776 |

¹The average weight of the bale is about 420 kilos. A kilo equals 2.2046 pounds.

250 NATIONAL ASSOCIATION OF WOOL MANUFACTURERS.

A marked feature of the exports from Argentina was the very large increase in the exports to Hamburg and Bremen, which were 34,294 bales more than were shipped to those ports in the season of 1911-12 (the largest season in the list except 1921-22) and 57,487 in excess of the shipments last season. The exports to Antwerp, much of which were, no doubt, intended for consumption in Germany, also increased over the former season, rising from 22,230 bales to 49,707. Those to Dunkirk for French consumption, increased 68,132 bales and were larger than in any season reported except 1910-11. Those to Italy increased 19,798 bales and to the United Kingdom, 38,621 bales, while those to the United States decreased 42,337 bales, or almost 50 per cent.

IMPORTS OF URUGUAYAN WOOLS INTO THE UNITED STATES FOR THE FISCAL YEARS 1910-1922, INCLUSIVE, AS SHOWN BY REPORTS OF UNITED STATES DEPARTMENT OF COMMERCE.

| Fiscal Year. | Class I. | Class II. ^a | Class III. | Total. |
|--------------|----------------|------------------------|----------------|----------------|
| | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i> |
| 1910..... | 8,768,627 | ..... | 21,158 | 8,789,775 |
| 1911..... | 711,525 | ..... | ..... | 711,525 |
| 1912..... | 3,125,759 | ..... | 91,229 | 3,216,988 |
| 1913..... | 3,537,824 | ..... | 181,049 | 3,718,873 |
| 1914..... | 11,639,243 | 41,949 | 1,336,526 | 13,017,718 |
| 1915..... | 16,561,154 | 18,334 | 18,135 | 16,597,623 |
| 1916..... | 8,858,492 | 245,090 | 405,164 | 9,508,746 |
| 1917..... | 34,710,261 | ..... | 2,891,700 | 37,601,961 |
| 1918..... | 17,488,372 | 90,383 | 830,256 | 18,409,011 |
| 1919..... | 34,386,870 | ..... | 6,720,795 | 41,107,665 |
| 1920..... | 44,643,043 | 697,969 | 1,966,355 | 47,307,367 |
| 1921..... | 32,882,635 | 766,984 | 2,536,672 | 36,186,291 |
| 1922..... | 8,376,306 | 14,426,845 | 587,337 | 23,390,488 |

(a) Under the designation combing, or Class II wools, are listed in official statistics many which do not fall within the definition of Class II wools contained in earlier tariff laws.

URUGUAYAN WOOL SHIPMENTS (IN BALES¹) TO OVERSEAS DESTINATIONS FOR TWELVE SEASONS, OCTOBER 1 TO SEPTEMBER 30.

| Seasons. | Dunkirk. | Antwerp. | Hamburg. Bremen. | Italy. | United Kingdom. | United States. | Bordeaux. Marseilles. | Havre. | Trieste. | Various. | Total |
|--------------|----------|----------|---------------------|--------|--------------------|-------------------|--------------------------|--------|----------|----------|---------|
| 1910-11..... | 34,358 | 23,127 | 39,301 | 3,013 | 5,098 | 718 | 664 | 3,496 | ..... | 4,853 | 114,628 |
| 1911-12..... | 33,938 | 28,416 | 34,056 | 5,904 | 11,124 | 5,062 | 1,272 | 4,128 | 4,826 | 593 | 129,319 |
| 1912-13..... | 37,677 | 19,030 | 30,128 | 6,783 | 13,918 | 2,766 | 44 | 4,190 | 5,163 | 2,468 | 122,167 |
| 1913-14..... | 25,948 | 17,408 | 27,681 | 2,981 | 2,838 | 10,522 | 1,042 | 1,921 | 5,639 | 4,302 | 100,282 |
| 1914-15..... | ..... | ..... | ..... | 44,767 | 1,004 | 15,157 | 673 | ..... | ..... | 11,175 | 72,776 |
| 1915-16..... | ..... | ..... | ..... | 22,832 | 1,161 | 10,080 | 770 | ..... | ..... | 10,128 | 44,971 |
| 1916-17..... | ..... | ..... | ..... | 10,665 | 1,729 | 46,078 | 1,675 | 253 | ..... | 2,958 | 63,358 |
| 1917-18..... | 1,458 | ..... | ..... | 19,661 | 100 | 17,139 | 2,176 | 3,596 | ..... | 19,621 | 62,293 |
| 1918-19..... | 16,910 | 3,908 | ..... | 4,865 | 2,295 | 61,875 | 3,879 | 12,546 | ..... | 22,465 | 113,291 |
| 1919-20..... | ..... | 14,831 | 5,128 | 5,934 | 6,877 | 38,003 | 1,483 | 4,048 | ..... | 11,426 | 104,640 |
| 1920-21..... | 9,051 | 9,608 | 35,393 | 3,327 | 6,802 | 35,886 | 1,627 | 2,310 | 200 | 6,400 | 110,604 |
| 1921-22..... | 15,776 | 7,181 | 33,958 | 5,813 | 6,651 | 25,161 | 593 | 505 | ..... | 4,082 | 99,720 |

¹The average weight of the bale is about 420 kilos. A kilo equals 2.2046 pounds.

THE WORLD'S SHEEP AND WOOL PRODUCTION.

In the following pages are given our usual estimate of the number of sheep in the world and the world's wool production. This is made up from census returns where obtainable, official estimates, and the best obtainable commercial estimates, and they must be accepted merely as such. Owing to the impossibility of securing from all the countries reported figures for exactly the same year, it is not possible to make the table tell the numbers or the production for the current year. Owing to unsettled conditions, no official figures or estimates can be secured for Russia, Turkey, and countries in Asia and Africa. The latter are not large contributors to the supplies of wool manufacturing countries, and the lack of information does not have an important bearing on the estimates of wool available for the world's machinery. Again, we say that the figures herein presented are simply estimates based upon the best obtainable information and must be understood as such.

NUMBER OF SHEEP IN THE WORLD ACCORDING TO THE LATEST AVAILABLE REPORTS AND ESTIMATES.

| Country. | Year. | Number of Sheep. |
|--|-------|--------------------------|
| NORTH AMERICA: | | |
| United States: Continental..... | 1922 | ^a 37,209,000* |
| Noncontiguous, except Philippine Islands | | |
| Hawaii..... | 1920 | 44,000** |
| Porto Rico..... | 1920 | 4,000** |
| Alaska..... | .... | 200 |
| Total United States..... | | |
| Canada..... | 1922 | ^a 3,262,626* |
| Newfoundland..... | 1911 | 98,000* |
| Total North America..... | | 40,617,826 |
| CENTRAL AMERICA AND WEST INDIES: | | |
| Mexico..... | 1922 | 500,000* |
| Guatemala..... | 1915 | 383,000* |
| Other Central America..... | .... | 124,000 |
| Cuba..... | 1921 | 30,000* |
| British West Indies..... | .... | 28,000 |
| Dutch " "..... | .... | 22,600 |
| Other " "..... | .... | 20,000 |
| Total Central America and West Indies..... | | 1,107,600 |

NUMBER OF SHEEP IN THE WORLD, ETC.—*Continued.*

| Country. | Year. | Number of Sheep. |
|--|-------|--------------------------|
| SOUTH AMERICA: | | |
| Argentina..... | 1922 | 43,000,000 |
| Brazil..... | 1920 | 7,933,437** |
| Bolivia..... | 1913 | ^b 1,750,000* |
| Chile..... | 1919 | 4,500,190 |
| Columbia..... | 1917 | 246,000 |
| Ecuador..... | 1921 | 180,000 |
| Uruguay..... | 1916 | 11,472,852** |
| Paraguay..... | 1921 | 600,000* |
| Peru..... | 1917 | ^a 6,357,396** |
| Venezuela..... | 1921 | 62,800** |
| Faulkland Islands.. | 1919 | 646,000 |
| Other South America .. | ..... | 300,000 |
| Total South America..... | | 77,048,675 |
| EUROPE: | | |
| Austria..... | 1920 | 452,983** |
| Belgium..... | 1921 | 125,000 |
| Bulgaria..... | 1922 | 10,000,000* |
| Czechoslovakia..... | 1920 | ^a 986,611** |
| Denmark ^d , Iceland, and Faroe Islands... | 1921 | ^c 1,169,328** |
| Esthonia..... | 1920 | 530,000 |
| Finland..... | 1920 | ^a 1,703,000 |
| France..... | 1921 | ^a 9,599,560* |
| Germany..... | 1921 | 5,892,417** |
| Greece..... | 1921 | ^a 5,547,000* |
| Hungary.. | 1921 | ^a 2,442,000 |
| Italy..... | 1918 | 11,754,000** |
| Lithuania..... | 1921 | 1,132,000 |
| Netherlands... | 1920 | ^a 668,211* |
| Norway..... | 1918 | 1,207,923** |
| Poland (exclusive of Vilno and Upper Silesia)..... | 1921 | ^a 2,178,216** |
| Portugal (Continental)..... | 1920 | 3,850,733* |
| Roumania..... | 1920 | 8,689,996** |
| Russia.. | 1920 | 36,065,000 |
| Spain..... | 1921 | 20,521,677** |
| Sweden..... | 1919 | ^a 1,563,654** |
| Switzerland..... | 1921 | ^a 244,435 |
| United Kingdom..... | 1922 | 24,218,305 |
| Yugoslavia... | 1922 | 8,461,504 |
| All other Europe.. | ..... | 20,000 |
| Total Europe..... | | 159,023,553 |

NUMBER OF SHEEP IN THE WORLD, ETC.—*Continued.*

| Country. | Year. | Number of Sheep. |
|---|-------|------------------|
| ASIA: | | |
| British India..... | 1918 | 22,895,000** |
| Ceylon..... | 1915 | 90,000** |
| China..... | 1921 | 45,000,000** |
| Cyprus..... | 1916 | 282,000** |
| Japan..... | 1921 | 5,098* |
| Philippine Islands.. | 1916 | 130,000** |
| Russia in Asia..... | 1920 | 14,479,000** |
| Turkey in Asia..... | 1912 | 27,095,000 |
| Other Asia..... | | 5,000,000 |
| Total Asia..... | | 114,976,098 |
| AFRICA: | | |
| Algeria..... | 1914 | 9,140,000** |
| Basutoland..... | 1919 | 1,369,000** |
| British South West Africa (formerly German) | 1913 | 550,000** |
| British Tanganyika Territory (formerly German East Africa)..... | 1915 | 6,440,000** |
| Egypt..... | 1921 | 986,000 |
| French Equatorial Africa..... | 1921 | 1,000,000 |
| French West Africa..... | 1918 | 5,864,000 |
| Italian Somaliland..... | 1920 | 1,666,000 |
| Kenya (British East Africa)..... | 1920 | 2,583,000 |
| Madagascar..... | 1920 | 300,000 |
| Morocco..... | 1921 | 7,264,000 |
| Rhodesia..... | 1917 | 368,000 |
| Soudan (Anglo-Egyptian)..... | 1909 | 830,000 |
| Tunis..... | 1919 | 2,662,000 |
| Uganda Protectorate..... | 1919 | 288,000 |
| Cape of Good Hope | 1922 | 35,091,980* |
| Natal | | |
| Orange Free State | | |
| Transvaal | | |
| All other Africa..... | | 1,500,000 |
| Total Africa.. | | 77,901,980 |

NUMBER OF SHEEP IN THE WORLD, ETC.—*Concluded.*

| Country. | Year. | Number of Sheep. |
|------------------------|-------|------------------|
| OCEANIA: | | |
| Australia..... | 1921 | 79,020,820* |
| New Zealand..... | 1921 | 23,285,031* |
| Total Australasia..... | | 102,305,851 |
| Other Oceania..... | | 10,000 |
| Total Oceania..... | | 102,315,851 |
| Total World..... | | 572,991,583 |

a Includes lambs.

b Includes goats.

c Iceland and Faroe Islands, years 1920 and 1919 respectively.

d Does not include sheep and lambs in North Slesvig.

e Includes Thibet, Mongolia, and Chinese Turkestan.

* Official estimates from the countries covered.

** Official census or other official reports from the countries covered.

All figures without asterisk are estimates based on best information obtainable.

WOOL PRODUCTION OF THE WORLD ACCORDING TO THE LATEST AVAILABLE
REPORTS AND ESTIMATES.

| Country. | Year. | Wool. |
|--|---------|---------------|
| North America: | | |
| United States..... | 1922 | 261,095,000 |
| British Provinces..... | 1922 | 18,523,392 |
| Total North America..... | | 279,618,392 |
| Central America and West Indies: | | |
| Mexico..... | | 792,000 |
| All other..... | | 750,000 |
| Total Central America and West Indies..... | | 1,542,000 |
| South America: | | |
| Argentina..... | 1922 | 237,000,000 |
| Brazil..... | 1922 | 27,000,000 |
| Chile..... | 1919 | 37,339,500 |
| Columbia..... | 1917 | 860,920 |
| Peru..... | | 9,000,000 |
| Faulkland Islands..... | | 3,200,000 |
| Uruguay..... | 1922 | 80,000,000 |
| All other..... | | 5,000,000 |
| Total South America..... | | 399,400,420 |
| Europe: | | |
| Austria..... | 1920 | 1,359,000 |
| Belgium..... | 1921 | 826,725 |
| Bulgaria..... | 1922 | 25,000,000 |
| Czechoslovakia..... | 1920 | 4,302,933 |
| Denmark, Iceland, and Faroe Islands..... | 1921 | 3,508,000 |
| Finland..... | 1920 | 7,275,180 |
| France..... | 1921 | 40,000,000 |
| Germany..... | 1921 | 51,808,000 |
| Greece..... | 1921 | 9,483,600 |
| Hungary..... | 1922 | 11,023,000 |
| Italy..... | 1918 | 49,906,433 |
| Netherlands..... | 1921 | 4,080,000 |
| Norway..... | 1921 | 4,409,200 |
| Poland..... | 1921 | 6,752,000 |
| Portugal..... | 1921 | 7,197,108 |
| Roumania..... | 1921 | 26,000,000 |
| Russia..... | | 110,000,000 |
| Spain..... | 1921 | 165,347,000 |
| Sweden..... | 1921 | 6,000,000 |
| Switzerland..... | 1921 | 800,000 |
| United Kingdom..... | 1922 | 103,000,000 |
| Yugoslavia..... | 1921 | 24,250,000 |
| All other..... | | 100,000 |
| Total Europe..... | | 662,428,179 |
| Asia: | | |
| British India..... | | 60,000,000 |
| China..... | 1922 | 67,000,000 |
| Persia..... | | 12,146,000 |
| Russia in Asi..... | | 43,434,000 |
| Turkey in Asia..... | | 81,285,000 |
| All other..... | | 1,000,000 |
| Total Asia..... | | 264,865,000 |
| Africa: | | |
| Algeria..... | 1915 | 47,831,002 |
| Egypt..... | 1921 | 4,500,000 |
| Morocco..... | | 21,000,000 |
| Tunis..... | | 3,735,000 |
| Union of South Africa..... | 1922 | 176,100,000 |
| All other..... | | 25,000,000 |
| Total Africa..... | | 278,166,002 |
| Oceania: | | |
| Australia..... | 1921-22 | 626,344,296 |
| New Zealand..... | 1921-22 | 191,613,500 |
| Total Australasia..... | | 817,957,796 |
| All Other..... | 1921 | 70,000 |
| Total Oceania..... | | 818,027,796 |
| Total World..... | | 2,704,047,789 |

IMPORTANT EVENTS IN THE AMERICAN WOOL
INDUSTRY IN 1922.

JANUARY.

5. Government wool auction of 8,000,000 pounds held in Boston. Prices advanced 25 per cent over those paid at the December auction.
9. Fifty-seventh annual convention of the National Wool Growers Association at Salt Lake City.
11. Supreme Court Justice Wagner of New York enjoined manufacturers of garments from combining to enforce 49 hour week.
16. Cloak workers in New York voted to return to work on January 18, on same wages and working conditions as prevailed before calling the strike in November, 1920.
18. Cotton mills in the Blackstone Valley, Rhode Island announced reduction of 20 per cent in wages. Beginning of strike which lasted until September 20, 1922.
22. United States Railroad Labor Board abrogated various rules of national agreement affecting part-time work and overtime.
24. Heads of Railroad shopmen's organizations rejected Labor Board's recent ruling.
31. United States Senate passed resolutions for refunding Allied debts to the United States, and provided for commission to extend time of payment, but not to cancel obligations.

FEBRUARY.

1. Connecticut and Rhode Island cotton mills announced wage reduction of 20 per cent and return to 54 hour working week.
2. Next to last wool sale by Government held in Boston. Prices 25 per cent higher than at January sale. About 7,000,000 pounds were sold.
3. York and Pepperell Mills, Maine, and other mills announced 20 per cent wage cut.
7. President Wood of The American Woolen Company announced that "there will be no reduction of wages this season." This reaffirmed what was stated in his letter in the December number of *The Booster*.
8. Fifty-seventh annual meeting of the National Association of Wool Manufacturers in Boston.

10. Organized workers at Amoskeag and Stark mills, Manchester, voted by 12,032 to 118 to strike on February 13. Minor disorders in mill strikes in Rhode Island.
 13. Operatives struck in Amoskeag and other New Hampshire mills and at certain Rhode Island mills because of announced wage reduction of 20 per cent and return to 54 hour working week.
 20. "Dye hearing" under King resolution was begun.
 22. All large railroads except the Pennsylvania asked United States Railroad Labor Board to make further cuts in workers' wages.
- Shawsheen Mills of the American Woolen Company began weaving about the middle of the month with partial equipment.

MARCH.

2. United States Government sold last of its war wools at auction in Boston, 4,000,000 pounds being disposed of at prices five per cent higher than at the February sale.
10. Returns from miners' referendum approved coal strike scheduled for April 1.
14. American Woolen Company auctioned 970 pieces of fine worsteds and serges at salesrooms of Burling, Dole & Co., 599 Broadway, New York City. Heavy demand for grays.
15. After appearance of Senator Gooding before Senate Committee on Finance, announcement was made that duty on wool was to be 33 cents per pound, on scoured content.
16. Advocates of dye embargo appeared before Senate Committee on Finance.
21. Officials of United Mine Workers of America issued order for coal strike in bituminous and anthracite fields on April 1.
27. Arlington Mills shut down for indefinite period.
Employes of the Arcadia, Everett, Katama, Methuen, Monomac, and Pacific mills struck against announced wage reduction of twenty per cent.

APRIL.

1. General strike in coal mines began.
7. Pacific Mills greatly affected by strike.
10. Pacific Mills closed entire plant indefinitely.
11. Fordney-McCumber Tariff bill passed by the House, July 21, 1921, reported to Senate.

12. Senator Edge introduced a joint resolution for inquiry into work of Trade Associations.
14. American Woolen Company advanced price of woollens 10 to 45 cents per yard.
15. United States Senate passed resolution extending immigration restriction two years.
17. Fifteen per cent wage cut reported in Rochester clothing market.
20. Tariff debate was begun in the Senate.
Officials of the Bureau of Standards conferred with representatives of textile industry.
Edwin Farnham Greene addressed Lawrence Rotary Club on strike situation.
Announcement made in Lawrence that mill managers would meet representatives of their own employees.
25. Bomb exploded in Jenckes & Crown plants in Blackstone Valley, R. I.
26. Senator Simmons attacked tariff bill.

MAY.

2. House of Representatives passed resolution extending immigration restriction two years.
4. American Woolen Company advanced prices on fancy worsteds and serges.
8. Senators Walsh of Montana and Underwood of Alabama declared belief in unconstitutionality of elastic tariff provisions.
11. Resolution adopted by fifth biennial convention of Amalgamated Clothing Workers to create a corporation with \$1,000,000 capital to operate clothing and textile plant in Russia under concessions from Soviet Government.
16. Senator Capper spoke against American Valuation.
27. American Woolen Company announced on their lines of suitings advances as high as 35 cents per yard, and on overcoatings from 50 to 82½ cents per yard.

JUNE.

6. American Woolen Company announced second advance in Departments 30, staple woollens; 4, women's wear, and 8A, uniform, and specialty fabrics.
12. American Woolen Company made a third advance in worsted fabric prices, bringing the advance on Fall lines up to an average of fifteen per cent.

23. Pacific Mills invited strikers to return to work on full time, with 20 per cent cut in effect and to remain until October 2, when wage question would be arbitrated by a designated committee.
30. Scotia Worsted Mills filed voluntary petition in bankruptcy.

JULY.

1. Four hundred thousand railroad shopmen struck.
5. Chairman McCumber of the Finance Committee presented to the Senate a petition to limit debate on the Tariff bill.
7. Petition to limit debate in the Senate on the Tariff bill was defeated.
Senator LaFollette, Wisconsin, spoke against the Tariff bill, attacking particularly the cotton schedule.
11. Announced wage reductions caused strike at Merrimac Manufacturing Company, Lowell.
14. Tariff rates on dyes before Senate. Senator Moses of New Hampshire attacked the Chemical Foundation, Textile Alliance, Inc., and the E. I. du Pont de Nemours Company.
15. Senator Moses spoke against embargo on dyes.
16. The Massachusetts Mills of Lowell announced reduction of 20 per cent, and the Lawrence Manufacturing Company, a wage revision with no amount stated.
21. Senator Gooding introduced a resolution in the Senate calling for the appointment of a commission of five senators, with power to send for persons and papers to investigate the predicted increase of price of suits and overcoats should the 33 cent rate per pound on wool, scoured content, be adopted.
22. Wool schedule before Senate. No quorum was present, but Senator Walsh, Massachusetts, attacked wool schedule, directing attention to the wool rates which he alleged would mean increased cost of \$72,600,000 to manufacturers and of \$200,000,000 to the public.
25. Senator Smoot proposed to limit duties on carpet wools to maximum of 60 per cent.
26. Senator Gerry asked for investigation of New England mill conditions.
Wool duty of 33 cents, scoured content, accepted by Senate by a vote of 38 to 16.

28. Senator Nelson attacked high tariff rates on wool which he claimed are higher than those of the Payne-Aldrich law.
29. Resolution presented by Senator Caraway, Arkansas, to have Senators' tariff interests investigated.
National Association of Merchant Tailors asked for more protection for the clothing industry.
31. Wool schedule completed by the Senate as a committee of the whole.

AUGUST.

1. American Woolen Company's department 4 completed its opening.
5. Senator Gooding denounced attacks by newspapers on Tariff bill.
10. Elastic tariff provision to give President power to change tariff for sufficient cause debated.
United States and Germany signed agreement for commission to adjust war claims. United States Supreme Court Justice Day named as American Commissioner.
11. Senate adopted the flexible tariff provision of the Tariff bill.
15. Soft coal strike ended by pact entered into at Cleveland, whereby men return to work at old scale until April 1, 1923.
18. Pacific Mills announced that their statement to Father O'Reilly meant they would agree on October 2 to pay wool sorters and other worsted department employes, as well as cotton and worsted loom fixers, the former rate of wages, dating back to September 1.
19. Senate passed Fordney-McCumber Tariff bill by vote of 48 to 25.
Senate conferees were McCumber, Smoot, McLean, R. Simmons and Jones, New Mexico, D.
21. All Lawrence unions rejected offer of the Pacific Mills.
Cornelius A. Wood chosen director of American Woolen Company to succeed his brother, the late William M. Wood, Jr.
22. Messrs. Fordney, Longworth, and Green, R.; and Garner and Collier, D. appointed House conferees on Tariff bill.
23. Pacific Mills requested employes to return on old scale, agreeing to make adjustments effective October 2 and retroactive to September 1.

24. First formal meeting of Republican conferees on Tariff bill.
25. More Lawrence mills restored old wage scale. All United Textile Workers accepted.
National Merchandise fair in New York City closed.
28. All unions except One Big Union accepted offer of Pacific Mills.
National Industrial Conference Board reported wages in general throughout the country have reached lowest point in decline and that there is a slight upward tendency.
31. At all Lawrence mills except one, strike was settled.

SEPTEMBER.

2. Anthracite coal mine strike ended by agreement to continue present scale until August 31, 1923.
11. Dye embargo extended until enactment of Tariff bill.
12. Lowell strike ended with old wage restored at cotton mills.
13. The House ordered report of Conference Committee on Tariff bill to be recommitted.
14. Strike of railroad shopmen since July 1 ended on some railroads, which yielded to demand for old seniority standing.
15. Committee of wool importers conferred with Assistant Secretary of the Treasury concerning regulations for prompt withdrawal of wool from bond.
Report of Conference Committee on Tariff bill adopted by the House, 210 to 90, without dye embargo provision, but with advanced rates on dyestuffs.
16. Tariff Conference Committee report in Senate. Point of order raised. Was legislation enacted in conference?
18. Committee of wool importers met and defined clean content. Agreed that estimate of yield should be based upon 12 per cent regain.
19. Fall wool sales in Australia opened at Brisbane. Forty thousand bales offered.
Conference Committee's report on Tariff bill adopted by Senate, 43 to 28.
21. President Harding signed Tariff bill.
Hearing before United States Appraiser McClelland on protest against including combing wool among those dutiable under the Emergency Tariff law.

Dye embargo ended at midnight when new Tariff law went into effect.

Judge Morton in United States District Court overruled demurrer filed by Messrs. Brown and Adams denying right of the Government to collect excess profits derived from the handling of the wool clip of 1918.

22. Government's side opened in combing wool protest case.
23. Congress adjourned.
27. American Woolen Company advanced prices for the Spring season ranging from nothing to 45 cents a yard.

OCTOBER.

6. Strike practically ended in Pawtuxet Valley and throughout Rhode Island. That in Blackstone Valley ended several weeks previous.
7. Control of Stafford Worsted Company, Stafford, Connecticut, purchased by E. S. Dunn of the Dunn Worsted Mills.
15. Last detail of Rhode Island militia removed from strike areas.
16. Weavers of Old Colony Woolen Mills, Rochester, N. H., struck for 48 hour week.
20. Question of admitting carbonized wool on 31 cent basis raised by committee of wool importers.
23. Strike at Old Colony Woolen Mills ended on basis of 54 hour week, but with increased pay.
American Woolen Company announced another advance on Spring lines, bringing the average advance for the season up to $12\frac{1}{2}$ per cent.
24. Hearings on combing wool case closed in New York.
Strikers accepted $52\frac{1}{2}$ hour week at Great Falls Mills, Somersworth, N. H., with same wage scale as before strike.
26. Question of what is wool waste brought to attention of customs division for ruling. Threads from Axminster rugs brought the issue.
Procedure for tariff rate protests made public.
30. Pacific Mills made advances in prices ranging from $12\frac{1}{2}$ to 25 per cent over last quotations.

Bishop Guertin of Manchester, N. H. advised 51 hour week until February 1, 1923 as result of conference, and recommended that Amoskeag owners and employes confer before that date to agree on satisfactory schedule, with same wages as before strike.

NOVEMBER.

1. Vote on Bishop Guertin's plan for 51 hour week favored by men, but rejected by mill managers.
3. Columbia Woolen Company of Lewiston, Maine, purchased Hinsdale Woolen Mills of Hinsdale, Massachusetts.
6. Hamilton, Lorraine, and Atlantic Mills advanced prices from 10 to 15 per cent.
7. At Congressional elections Democrats gained six seats in the Senate. New Senate will be 53 Republicans, 42 Democrats, 1 Independent. Republican majority of 165 in the House reduced in new Congress to about 15. New House will be approximately 225 Republicans to 207 Democrats, with several Independents.
9. President Harding called extra session of Congress for November 20.
11. Forstmann and Huffman filed a charter for a corporation to deal in yarns and threads. Capitalized at \$16,000,000.
13. Botany Mills withdrew their general line of fabrics. Strike of nine months at Pacific Mills, Dover, N. H., ended, with 54 hour week in force.
20. Congress convened in special session. Pacific Mills withdrew all their lines of dress goods.
21. President addressed Congress and urged passage of a ship subsidy bill.
26. Amoskeag strike of forty-two weeks ended under protest, eighty per cent voting for return. Mill restored twenty per cent wage cut but maintained fifty-four hour week.
27. William M. Wood elected director-general and chairman of the board of the Consolidated Textile Corporation
28. Treasury Department promulgated ruling that carbonized wool is dutiable at 33 cents per pound and 20 per cent ad valorem, the same duty as on tops.

DECEMBER.

1. Bureau of Foreign and Domestic Commerce began weekly cable reports from Bradford.

4. Second regular session of sixty-seventh Congress opened. Farr Alpaca Company paid 14 per cent dividend to employees according to profit sharing scheme of 1913, 2800 sharing in \$600,000.
6. Albert S. Gifford elected President of the American Association of Woolen and Worsted Manufacturers.
8. President Harding addressed new session of Congress.
18. American Woolen Company announced opening of blanket season.
20. Sub-Committee of Committee on Interstate Commerce of Senate reported French-Capper compulsory textile branding bill to the full committee without recommendation.
21. Fall River Textile Council set aside demand for increased wages by American Federation Textile Operatives.
22. Senate Committee on Interstate Commerce reported the Capper compulsory textile branding bill favorably to Senate. Word "shoddy" replaced by "re-worked wool," and, if enacted, title will be the "Wool Woven Fabric Law."

BULLETIN
OF THE
National Association of Wool Manufacturers
A QUARTERLY MAGAZINE
DEVOTED TO THE INTERESTS OF THE NATIONAL WOOL INDUSTRY

VOL. LIII.]

BOSTON, APRIL, 1923.

[No. 2.

THE PROPOSED "TRUTH IN FABRIC" LAW
IMPARTIALLY EXAMINED.

BY ARTHUR H. COLE.

In his inquiries into the history of the American wool industries, and in his work for the Tariff Commission, Doctor Cole has earned an enviable reputation as a careful and painstaking investigator. His standing as a professor of Economics at Harvard University is thus enhanced by his contact with the specific problems of this industry and his calm and detached attitude toward its moot questions. It is with great pleasure, therefore, that we are able to present his unsolicited views on the subject of the compulsory branding of wool fabrics, and we are particularly pleased that his judgment confirms in the main the position we have taken before the public for several years past.—*Editor.*

INDUSTRIAL maturity and in some degree modern national progress may be measured by the extent to which raw materials are economized; and in this regard the United States in recent decades has been approaching steadily the status of most European countries. Clippings of leather are carefully collected, pulverized, and worked into artificial leather, of sundry trade names, and the product is hailed as a triumph of ingenuity. Pierced cocoons and the tag ends of silk fibre are conserved and the products thereof, spun-silk threads and fabrics, are acclaimed objects of beauty and the evidences of man's economy. Even the unpleasant grease from the sheep's wool may be recovered and purified, for our use in the form of salve or soap, and we are gratified. But "shoddy"! No, there is something intrinsically harmful about that. We are not sure just why; but we feel it had better be left alone.

This suspicion, inherited from our forebears or inspired by loose parlance in current literature, seems about to be capitalized. Reformers or interested parties appear disposed, with the assistance of an ill-informed or partially-minded Congress, to compel all manufacturers and dealers in wool products, wool cloth and wool clothing, to damn in the eyes

of an equally ill-informed public all fabrics containing any proportion of this horrible substance. Existing political conditions, especially the composition of the next Congress, threaten the enactment of some sort of legislation dealing with this subject. Consequently, it is of prime importance to appreciate at once the significance of the proposed action, to judge between possible means of attaining the desired end, and to support that alternative which promises least harm to one of our leading industries and most good to every consumer of wool fabrics in the United States, that is, to all of us.

ORIGIN OF PREJUDICE AGAINST SHODDY.

The origin of the public prejudice against this textile material is not hard to ascertain. It arose in the mistakes of inexperience. Let us dip into history. Prior to about 1813 all wool fibre which went into cloth came direct from the sheep's back. Then a fertile-minded manufacturer of Batley, England, discovered that knitted and woven fabrics could be torn apart and perfectly serviceable fibre recovered. Philosophically viewed, this invention was the consequence of the prodigious increase in population resulting from the so-called industrial revolution of the eighteenth and early nineteenth centuries. The growth in number of consumers had begun to outstrip the increase in wool supply,—a situation the more evident when we recall that Australasia had then only begun her production of wool.

The effect of this development upon the American manufacture of woollen goods was not immediate. We had sufficient domestic supplies of new wool for our needs, or could afford to import such wool from South America or Europe. However, when the extraordinary military demands of the Civil War broke upon that manufacture, and when national economy became necessary, the utility of "recovered wool fibre" as I shall hereafter designate the material, was recognized. But by reason of the haste with which military supplies had to be put through (we had to import from England to cover our most urgent needs), some of the fabrics for soldiers' uniforms were not well made. On this account, they wore out rapidly, were not so warm as they ought to have been, and the reworked stock was blamed. Recovered wool fibre gained a

bad name, and, once fixed under those circumstances, such a reputation would tend to be long retained in the public mind. But two or three generations of manufacturers have come and gone since the dark days of the Civil War. These men have gained information as to the use, and possible abuse, of this textile material, and have passed that information on to their successors. As to the skill of the present corps of manufacturers in utilizing recovered wool fibre, it is unnecessary to expatiate. Suffice it to say, that in the World War, the American soldiers were generally recognized to have been the best clothed soldiers of any nation, although a large proportion of their overcoatings and blankets contained thirty-five per cent of this "detestable stuff."

Making capital out of the popular prejudice with regard to "shoddy", the advocates of the bill which was introduced in the last sessions of Congress—called so captivatively the "Truth in Fabric" bill—propose that all yarns, fabrics, and clothing, whether domestically manufactured, or imported, shall be marked in such a manner as to indicate the proportion of "shoddy" or "reworked wool" that they contain. To be sure, the branding proposed would also indicate the proportions of cotton, the costly silk, and "any other ingredient"; but the real purpose of the legislation is unquestionably an attack on "shoddy." Each article containing "shoddy" or "reworked wool" would come to public trial under a definite indictment, with the shadow of guilt upon it; and in the present state of public thought, the outcome would be in no great doubt.

What the animus behind this "drive" is, need not here detain us: whether, as the Congressional allignment and public agitation suggest, the impulsion comes from the wool growers and agricultural interests seeking to increase the use of new wool and hence to enhance its price. Nor is it necessary here to prove the social advantage, even necessity for the use of recovered wool fibre. It can be demonstrated statistically that the world's supply of wool just "won't go round." There is insufficient new wool produced each year to keep warm those of us who live in these temperate (or perhaps intemperate) climates. There is no question but that we *must* use this material—or freeze.

Yet the proponents of branding legislation might admit the value, even the necessity of employing recovered wool fibre and still have a good case. They declare that they do not mean to stop the use of "shoddy", but only to prevent its masquerading as new wool. They lay particular emphasis upon what they call the public's "right to know"—the right to be apprised of the constituent fibres in the goods it purchases. We may limit ourselves to this question. And even here we need not quibble as to whether or not the public has a right to know all that it wants to know, as diplomatists seem to argue sometimes. The question of "right", then, simmers down to one of "desire": what does the American public *want* to know?

KNOWLEDGE OF FIBRE QUALITIES RATHER THAN PROPORTIONS OF FIBRE CONTENT DESIRED.

Right away it may be propounded that as consumers, we are *not* interested *per se* in how much recovered wool fibre there is in this suiting or this overcoating. What we want to know is: Will the cloth or the garment keep us warm? Will it keep its shape? Will it wear well? Such qualities may be expressed technically as heat-retention, elasticity, and durability. Closely allied is another factor, that of tensile strength, which bears upon both elasticity and durability. It will be readily appreciated, upon reflection, that the qualities required in a pair of dress trousers differ radically in proportion, from those desired in, say, a blanket. The one must not bulge at the knees after a little wear, or, technically speaking, must have a high degree of elasticity (the ability to return to the previous state after being forced therefrom), but a blanket does not suffer any considerable strain of this sort. On the other hand, a blanket must have a high degree of heat-retention; while pride will keep us warm for a time in dress trousers! Or take the matter of tensile strength. The loose-spun yarn of a Harris tweed or an Axminster carpet is not subjected to, or expected to resist, a severe longitudinal pull in the manufacture of, or after it is incorporated into, the finished fabric; but the force exerted in the expression of vegetable oils demands even greater tensile strength than that of the ordinary wool fibre or wool yarn. Recourse must be had to that close

cousin of the wool fibre, camel's hair, or to that more distant relation, human hair. This phenomenon of purposeful selection, it may be noted in passing, is in no way peculiar to the wool manufacture. Everywhere in industrial activities it is evident. The requirements of the iron metal in a cook stove differ radically in proportion, from those of a T-rail. For the one, cast-iron will do; for the other, the best steel is none too good. Again, the type of paper employable for newsprint is of quite a different quality from that needed in paper bags. The strain upon a newspaper is slight, but the housewife does not wish to leave her purchases along the street!

It is in relation to such considerations as these that the "branding" proposal for wool products should be judged. For example, let us compare two overcoatings. One has a twenty percentage of recovered wool fibre; the other is "all wool" (though of course both are really the latter). The strain on an overcoat is much less than that on a suit of clothes, and consequently a fabric with somewhat lower tensile strength and elasticity will fulfill the requirements of the consumer quite adequately. A piece of goods with a substantial admixture of recovered wool fibre, having the same, or approximately the same, heat-retention quality as a fabric made from new wool alone, will by its relative cheapness more than compensate for the negligible diminution in durability which may come from the introduction of the shorter fibres of the recovered wool.

While the presentation of such data to the prospective purchaser of wool fabrics would theoretically be advantageous, there are practical conditions which make the project impossible. Chiefly, the data could not be presented in such a form as to be readily understandable by the great body of consumers. Statistics of breaking points or resistance to friction would become little more than mumbo-jumbo with which the artfully loquacious salesman could hypnotize the ignorant victim. As between manufacturers and wholesalers, or clothiers and retailers, among whom some of the technical information would be appreciated, there is no real need for it, since all have been trained in the rough school of experience to know the qualities inherent in wool fabrics,—the qualities of heat-retention, elasticity, and the like, which really affect

the well-being of the ultimate consumer and which make satisfied customers. These qualities among such traders are recognized by rules of thumb,—real'y rules of fingers, since the sense of touch plays so important a part, and scientific data would make no real contribution. Beyond the question of the utility of such statistical information, there is the further matter of practicability, of administering any law requiring the presentation of such data. This raises such a problem that I refrain from even suggesting a method whereby it could be met.

BRANDING UNDER CAPPER BILL WOULD SERVE NO USEFUL PURPOSE.

At least it is obvious that a branding of cloth or clothing containing "substitutes for virgin wool", as the Capper bill had it, would serve no useful purpose. A Scotch homespun made wholly of new wool, hand-spun and hand-woven, may yet be less serviceable for some purposes, as for example a business suit, because of its relatively loose weave and consequent tendency to "bag" at the knees and elbows, than a piece of domestic cassimere with, say, ten per cent admixture of recovered wool fibre, if this fibre is of the medium and better grades of such materials and if the cloth has been well milled in the finishing processes. Yet the latter, if labeled in accordance with the proposed plan, would under present conditions of public opinion suffer somewhat the same obloquy as a counterfeit coin in our well regulated currency. Or take the case of a cotton-warp piece of dress goods. By virtue of arrangements in the weaving operation, the wool weft of the fabric may be brought to the surface and the cotton warp buried in the body of the goods. It becomes, then, to most intents and purposes, a wool fabric. In strength and durability it will rival or surpass the all-wool article, while its slightly lower power of heat-retention may be inconsequential to the purpose for which it is intended and may well be more than compensated by its relative cheapness or perhaps additional elasticity. Retailers are, moreover, progressing in the way of greater frankness to their customers in the admission of cotton mixture in pseudo-woolen goods. Ultimately we shall reach the high plane of the English traders. I recall the

question shot back at me when in a British shop I inquired for "woolen" pajamas: "Half-wool, three-quarters-wool, or all-wool?" The indifference of the clerk's tone and attitude was highly suggestive of the situation in retail selling across the water.

The deficiency of the "Truth in Fabric", or "Wool Woven Fabric", bill as regards matters of detail may be overlooked. Although the bill as reported to the Senate on December 22, 1922 was amended more than some of its supporters believed advisable, still the objections to the earlier drafts have been but little removed. However, attention should still be given to the difficulties and expense of administration, both on the part of manufacturers and merchants, and on that of the Government. It may be noted that in 1919 approximately 325 million square yards of wool-woven fabrics were produced in the American mills. This mammoth production, together with imported goods and probably all wool carpeting, would come under the obligations entailed by the proposed legislation. The trouble and direct costs to manufacturers and merchants would inevitably be reflected in somewhat enhanced prices. As for the Government, the difficulties and expenses connected with recent attempts at sumptuary control do not invite further incursion into that general field.

MERCHANDISE MARKS ACT ENDORSED.

Yet despite all arguments to the contrary, some legislative action on this line may be taken in the next or some early Congress. It is important, then, to consider whether the problem may not be approached from another angle. Such, in fact, seems to be possible. The essential aim of the proponents of the "Truth in Fabric" bill, it appears, would be gained by the enactment of a law upon the model of the British Merchandise Marks Act. This law in substance forbids misrepresentation. A typical case prosecuted under it was of the so-called Witney blankets. Witney, one of the old wool-working centers of England but isolated from the more important West of England and Yorkshire districts, has maintained, and has specialized in, the production of high-grade bed blankets. The designation of fine bed blankets from other centers as Witney blankets had an advertising value,

and indeed to some extent the term Witney had come to indicate quality rather than the source of the article. Yet the British courts held that the indiscriminate use of that term was unlawful under the act, and that the term might rightly be employed only in the case of blankets coming from the particular town of that name. Again, in 1893 a Leicester manufacturer was fined for applying the description, "Natural Wool", to knitted fabrics containing fifty-nine per cent cotton. Such a law, in brief, accomplishes by a flanking movement substantially all that could be gained by a much more laborious and largely misleading frontal attack. It is unquestionably much to be preferred. Some action in this very direction has, indeed, already commenced in this country under the guidance of the Federal Trade Commission. In its administration of the law relating to unfair practices in competition, the employment, for example, of the ambiguous word "merino" has been restricted to articles containing only merino wool—despite the common trade practice of designating as "merino" yarns those produced by an intermixture of cotton and wool fibres. The adoption of a law modelled on the British Merchandise Marks Act would, in short, be only a reasonable extension of existing American practice.

BASIS OF "TRUTH IN FABRIC" LEGISLATION OPEN TO CONDEMNATION.

Such legislation as this, too, is more closely allied with the spirit of American life. It is our purpose to prevent fraud or deceit. Despite the institution of the Eighteenth amendment to the Federal Constitution and the enactment of anti-cigarette laws in some states, I believe it is not the desire of the American people to go much further in this direction. The spirit of *laissez-faire* is not dead. One may easily conjure up the horrors involved in a logical extension of the principle basically concerned in the "Truth in Fabric" proposal.

In short, the underlying basis of "Truth in Fabric" legislation is erroneous, and in the present condition of the public mind as to recovered wool fibre such legislation is open to special condemnation. The technical considerations in wool manufacture are not, and probably cannot be made sufficiently understood among the consuming public, so that branding

would accomplish the end at which it is aimed. The old method of trial and experience is as yet the best. In addition, legislation of the proposed type threatens to open a new field of governmental paternalism. If there must be action of some sort, however, it is at least temporarily sufficient to limit the field of possible error on the part of purchasers in the market, by the elimination of downright deception and fraud. Experience under that regime will better determine whether it is necessary to essay the hazardous, troublesome, and expensive method of control outlined in the scheme prematurely embodied in the current branding proposals.

THE FIFTY-EIGHTH ANNUAL MEETING OF THE NATIONAL ASSOCIATION OF WOOL MANUFACTURERS.

BUSINESS TRANSACTED. REPORTS OF OFFICERS AND
COMMITTEES. ELECTION OF OFFICERS.

THE fifty-eighth annual meeting of the National Association of Wool Manufacturers was held on the afternoon of Tuesday, February 20, 1923 following a luncheon at the Algonquin Club, Boston. The meeting was called to order by President John P. Wood.

The reading of the minutes of the last meeting was omitted, the same having been printed in the Bulletin and no corrections having been presented. The report of the Treasurer was read, and by vote was approved and ordered placed on file. It showed a balance on hand and all obligations paid. This was followed by the reading of the report of the Auditor, which also was accepted and ordered placed on file.

The Secretary, Walter Humphreys, read his report covering the activities of the Association during the year. It was voted that it be accepted and placed on file. It was as follows:

REPORT OF THE SECRETARY.

To the Members of the National Association of Wool Manufacturers:

The outstanding event of the past year for wool manufacturers was the enactment of the tariff bill in September, 1922, replacing the Emergency Tariff which had been in operation since May, 1921. Whether or not manufacturers were in sympathy with all the items of the wool schedule, they were unanimous in urging the early enactment of the bill. The uncertainty caused by the long, tedious delay in its passage was reflected throughout all branches of wool manufacture. The practical embargo on certain kinds of foreign wools continued for the first nine months of 1922, and wool manufacture was fast approaching a crisis.

Regardless of the tariff, prices of raw wool have risen in foreign as well as domestic markets. Tops and worsted weaving yarns were fairly stable in 1921, but throughout the year 1922 there was a general advance in their prices. In spite of

this increased cost of raw materials, the demand for lower prices for goods has been insistent.

At the beginning of the year there was a relatively greater demand for woollens than for worsteds, but later there was a noticeable increase in the demand for worsteds.

The advance in the price of yarns and fabrics was not commensurate with that of raw materials. The selling price was often less than the replacement cost. This was due in part to the fact that some manufacturers who had purchased good supplies of wool hoped by keeping their machinery active to provide at least for fixed charges and overhead expenses.

Another event of interest to wool manufacturers was the final auction, in March 1922, of Government owned wool. The salvage to the Government on its surplus wool purchases was about 85 per cent of cost. In no other commodity that the Government held did the salvage reach so high a per cent. The fact that the Government's holdings of wool are now disposed of is one more factor to hasten the return to normal market conditions for this commodity.

The consumption of wool and the stocks of wool are now nearer the 1918 conditions. While the total of wool consumption is approximately normal, compared with 1918, that of domestic stocks is distinctly higher since wools held for several years came out of storage because of attractive prices paid in 1922. The consumption of carpet grades was marked by a great increase throughout the past year.

The usual uncertainties concerning the administration of a new tariff law have arisen. The regulations concerning the importation of carpet wools provoked adverse criticism. The decision making the rate of duty on carbonized wools the same as that for tops has been justly protested by those using these wools; and the more recent Treasury ruling, whereby wools from Iceland are to be assessed under paragraph 1102 of the tariff law, is challenged, particularly, as it is based upon the classification by usage rather than by "blood". Classification by usage would involve endless controversy and intolerable confusion. The final adjustment of these questions will involve much delay. Apart from these specific cases of uncertainty, with the main question of the tariff settled, and because of under-production during the last two and half years, there is a spirit of hopefulness for a successful year to come.

JOINT TARIFF COMMITTEE.

After the Tariff Committee had completed the preparation of its case for presentation before the Senate Committee on Finance, on December 14, 1921, the necessity for its activity

as a committee lessened. Individual members of the committee in co-operation with the executive officers, were, thereafter, much engaged in following the long and tedious debate on the Fordney-McCumber bill in the Senate. A meeting of the Joint Tariff Committee Representing Wool Manufacturers was held in New York on August 23, 1922, during the period between the acceptance of the bill by the Senate and the report of the Conference Committee of the Senate and the House. At this meeting the status of the wool schedule was reviewed and disappointing features of the bill were discussed. It was the sense of the meeting that rather than further to protest against certain objectionable features of the bill, it was more important to have it enacted to replace the Emergency Tariff Act and dispel uncertainty.

FABRIC BRANDING LEGISLATION.

In the report for last year it was stated that the Senate Sub-committee would submit certain samples for analysis to the Bureau of Standards of the Department of Commerce and the Bureau of Chemistry of the Department of Agriculture. Frequent inquiries were made as to the progress of these analyses, and in December it was learned that the samples were still untouched although the Sub-committee had received them the previous March. Believing that the results of the Government tests upon these samples would be an important feature in the discussion of branding legislation, members of the Association appealed to the chairman of the Senate Sub-committee to hasten the analyses. Notwithstanding these appeals to have the analyses (which had been agreed upon) made, on December 20, the Sub-committee reported the bill, without recommendations, to the Committee on Interstate Commerce and that committee, on December 22, reported the bill to the Senate, where it is now on the calendar. The Association's committee continues its active support of the Rogers-Lodge "Honest Merchandise" bill which Senator Lodge has offered as a substitute for the Capper bill. Senator Lodge's bill applies not only to woven wool fabrics, but to all kinds of merchandise. As it is unlikely that the present bill will become a law at this session of Congress, the Association's committee should be continued.

COMMITTEE ON STANDARDIZATION OF COST FACTORS.

Immediately after the last annual meeting the Committee on Standardization of Cost Factors appointed sub-committees to study and make report upon the sub-division of labor, overhead expenses, and raw materials. These committees have reported to the general committee which, after seven

meetings during the past year, has submitted to the Board of Directors a report of progress. In asking this committee to present a report, it was not the intention to obligate any member of the Association to conform to such suggestions as it might make, but it was the belief that the results of such a study would be particularly helpful in the problem of federal tax returns. The report by the chairman, George C. Hetzel, presented a basis for uniform practice.

COMMITTEE ON DEFINITIONS.

After the Committee on the Standardization of Cost Factors made a report of progress at the November meeting of the Board of Directors, a discussion occurred concerning correct definitions of shrinkage and of clean wool. This led to the appointment of a committee to report upon the relation of shrinkage to raw material, and to suggest a definition for clean wool which could be accepted as a standard. It was thought that such a study and the presentation of a definition would lead to a better estimate of the cost of raw material. The following are members of this committee: Mr. Jacob F. Brown, chairman, and Messrs. Thomas T. Clark, Harold S. Edwards, Marland C. Hobbs, and Norman MacColl. Three meetings of the committee were held in December and a report has been formulated which, after final approval, will be published for the information of all who are interested.

CO-OPERATION WITH THE DEPARTMENT OF COMMERCE.

At the last annual meeting a report was made of a conference with the Department of Commerce at which it was urged that the former terms of Clothing Wool, Combing Wool, and Carpet Wool—Classes I, II, and III—be resumed and that the change made in terminology beginning with the Monthly Summary of the Department for July 1921 be abandoned. This recommendation has been accepted. As a further result of the conference the Bureau of the Census has continued to separate the figures for woolen and worsted goods rather than to merge them. It was intimated in the report of a year ago that the Bureau of the Census would probably take over, on a permanent basis, the collection of certain statistics covering wool stocks and wool consumption, in connection with the reports upon active and idle machinery. This has been effected. The Bureau of the Census has dropped from the reports of wool consumption the figures which, based upon estimates, formerly appeared under the designation, "Grade not stated".

Your president suggested that the secretary plan, through English agents, to secure and send to members of the Association reports of the clean content equivalents of prices realized

at the English auction sales of wool. Arrangements were being made for this when your president succeeded in having the Textile Division of the Bureau of Foreign and Domestic Commerce undertake such a service. Members were circularized at the time the first cabled reports were received, and the names of those who desired to continue to receive them were placed upon the mailing list of the local manager of the Bureau of Foreign and Domestic Commerce, this Bureau having undertaken to issue the reports, as well as to collect them.

CO-OPERATION WITH THE NATIONAL INDUSTRIAL CONFERENCE BOARD.

During the past year the Association has continued its connection with the National Industrial Conference Board, with which it has co-operated for several years. The representatives of the Association on the Board for the past year have been President John P. Wood and Mr. Frederic S. Clark, who is also a member of its Executive Committee. Mr. Clark will report upon the work of the Board for the past year.

RESEARCH AND STANDARDIZATION.

The Bureau of Standards invited representatives of this Association, together with those from other textile associations, to a conference in Washington last September. The Bureau renewed its offer to co-operate with the textile industries and invited the various organizations represented to appoint committees to co-operate with it in textile research. In accordance with a resolution adopted at this conference your president appointed George C. Hetzel, Charles H. Wilson, John P. Wood and the secretary of this Association, who, with representatives of the American Association of Woolen and Worsted Manufacturers and the National Association of Worsted and Woolen Spinners, form a Joint Committee on Research and Standardization representing wool manufacturing associations. The Board of Directors has confirmed this executive appointment. A subsequent meeting of this Joint Committee was held in Washington on December 12, when a definite program for research was placed before the Bureau of Standards. On the preceding day the Joint Committee met at the Bureau of Agricultural Economics of the Department of Agriculture to review the progress made in defining standard wool grades. On this same day it convened at the Department headquarters upon the invitation of the Secretary of Commerce, extended through the Chief of the Division of Simplified Practice, to hear the proposals of this Division concerning the possible elimination of superfluous varieties

of wool manufactures. While this Division has been successful in having certain industries confer and find styles and sizes of their product which can be omitted, your committee called to the Division's attention the fact that wool fabrics are made not only for protection but for adornment and are subject to the caprices of fashion and the desires of the consumer. Certain suggestions were made and a further conference will be called by the Division of Simplified Practice. Your committee, however, in a spirit of co-operation, made certain suggestions with regard to simplification and standardization which it thought might possibly be effected without prejudice to the interests of the wool manufacturing industry. These, however, would require the concurrence of the manufacturers of garments; and it was suggested that the Department invite opinions from representatives of the clothing industry. This committee was represented at a later conference of blanket manufacturers, at which the necessary sizes of blankets were discussed. This meeting was announced as a preliminary one for organization.

Another conference was held on February 6, with the Department of Agriculture, where representatives of the Committee on Research and Standardization approved the recommendation of the Department that seven grades of wool fiber, named in accordance with American terms, be adopted with the understanding that more minute divisions, in accordance with the English numerical system, be adopted, and that they be related to these larger divisions when international agreement for the numerical standards can be realized.

COMMITTEE ON FINANCE AND ACCOUNTS.

At a meeting of the Directors in November, upon the president's recommendation a Standing Committee on Finance and Accounts was appointed. The members are: Mr. Frederic S. Clark, chairman, and Messrs. Jacob F. Brown, and Nathaniel Stevens. The committee has made recommendation to the board relative to various subjects within the field assigned to it.

PERIODICAL PUBLICATIONS.

During the past year four issues of the Bulletin of the Association have been published. The Annual Wool Review was printed as an extra number of the Bulletin since it could not contain the desired statistical information and be published promptly as a part of the January Bulletin. The January, 1923, number was late in publication because of delay in receiving certain statistics issued by the Government.

It is now planned to have future issues published more promptly, incorporating the latest statistics available rather than to delay until they can be brought down to a specific date.

During the year the "Monthly Statement of Imports and Exports of Wool and Wool Manufactures" and "Monthly Figures on the State of the Industry" have been carefully prepared by the assistant secretary, Mr. John B. McPherson. On account of the transfer to the Department of Commerce of the duty to collect certain statistical information, the reports for some months were delayed and combined with subsequent statements. In his work upon these statistical reports, the assistant secretary is ever mindful of the need of accuracy, and he has continually in view the purpose to sustain the reputation the Association has gained for the reliability of its Bulletin and its statistical publications.

REFERENCE BOOK OF THE NATIONAL ASSOCIATION OF WOOL MANUFACTURERS.

At the annual meeting of last year plans were announced for a loose-leaf reference book of tables and formulas covering the wool manufacture. Since that meeting the covers, index sheets, and 44 separate pages have been distributed among members. Parts of the "Wool Book", published by the Association in 1895, are to be brought up to date and printed as pages of this Reference Book; and other tables of interest to the industry will be published from time to time as the data can be completed.

WAGES.

In view of the fact that wages did not differ materially from those of the last half of 1921, the Association did not make a new canvass of this subject during the past year. The Department of Labor recently issued a tabulation of the wages paid in the wool manufacturing industry, which, in general, conformed closely with the last report from members of the Association.

BULLETINS.

In addition to the regular publications and reports, there have been mailed to members numerous mimeographed bulletins upon various subjects.

MEETINGS OF THE BOARD OF DIRECTORS.

During the year the Board of Directors has held three meetings—on March 2, June 8, and November 15. These meetings have been supplemented by three meetings of the

Executive Committee held on April 18, May 26, and July 12, 1922. At these meetings routine matters and questions of policy, after discussion were acted upon. The committees, noted in this report, were appointed and reports of progress from others, were received. At the March meeting the executive appointment of Mr. Franklin W. Hobbs as the representative of this Association on the Dyes Committee of the Textile Alliance, Inc., was confirmed by the Board of Directors. At the November meeting the Directors accepted with regret the resignation of Mr. Walter Erben of Philadelphia who had found it impracticable to continue his long membership upon the board. In his place Mr. Arthur S. Harding, first vice-president of the Erben-Harding Company, was appointed to fill this vacancy.

RESIGNATION OF THE SECRETARY.

At the meeting of the Executive Committee on April 18, 1922, the resignation of Mr. Paul T. Cherington as secretary of the Association was accepted to take effect on June 1, 1922. Resolutions expressing the regret of the Association for the loss of his services were adopted. From frequent conferences with Mr. Cherington I know of his regard for the members of the Association and his regret in leaving them. He has been generous to the new secretary in offering numerous suggestions and has been always helpful. His interest in the welfare of the Association continues. I have read in Mr. Cherington's report for the last year his comment upon the office staff, which I am glad to endorse in full. One member resigned to take up teaching, and the vacancy has been filled by one with whose ability and industry the secretary has been familiar for a long time.

All of which is respectfully submitted,

WALTER HUMPHREYS,
Secretary.

Following the report of the secretary, President John P. Wood gave an informal review upon the tariff, branding legislation, the Textile Alliance, Inc., the problem of research, and the continuation of the work undertaken by the Committee on the Standardization of Cost Factors.

RESOLUTION ADOPTED.

The following resolution was submitted and unanimously adopted:

RESOLVED, That this Association commends the excellent work of the Bureau of the Census in the procurement and

prompt dissemination of statistical data relating to the wool manufacturing industry.

On behalf of the representatives of the Association in the National Industrial Conference Board, Mr. Frederic S. Clark submitted the following report concerning the work of that organization and the participation of the Association's representatives in it. It was voted that this report be approved and placed on file.

REPORT ON NATIONAL INDUSTRIAL CONFERENCE BOARD.

The membership of the National Industrial Conference Board now consists of two delegates from each of twenty-seven national associations of manufacturers and four state industrial organizations.

This Association has been represented the past year by President John P. Wood and Mr. Frederic S. Clark.

Meetings are held monthly with the exception of July and August and as a rule in New York City, but occasionally, by invitation, in some other important city, for instance in Cleveland last January. The sessions which begin at 10 A. M. last until 4 P. M. and interest in them is so great that as a result they are largely attended. Your representatives have been present at all but one or two meetings. The Board holds an executive session for an hour or two, after which invited guests prominent in financial, industrial, and governmental life are admitted and they take part in the discussions which follow. Quite frequently men of exceptional importance from foreign countries are present and give valuable information as to conditions abroad.

The Board is organized for research study of vital questions affecting industry and employs at present a staff of ninety persons, of whom more than half are research experts. Their reports are submitted to the members of the Board for criticism and discussion and, after approval, are given a wide circulation.

The publications of the Board are acknowledged to be the best authority on the subjects treated. They are being extensively quoted and are made use of by Government Commissions, such as the Labor Board, the recent Foreign Debt Funding Commission, Railroad and Coal Executive Boards, Educational, Financial Institutions, etc. The Board is a fact finding body, but does not undertake propaganda work. After investigation, it states its conclusions and recommendations, leaving appropriate action to the judgment of the constituent organizations and others interested.

Thus far it has issued fifty-seven research reports and twenty-two special reports. Among the subjects treated in these reports are:

- The Cost of Living, (monthly reports).
- Average Hourly and Weekly Wages in Industrial Establishments. (Monthly Reports based on reports from 1,600 establishments employing 600,000 persons).
- Experience with Works Councils.
- Unemployment Insurance.
- Taxation and National Income.
- Consolidation of Railroads.
- Mutual Benefit Associations and Sick Benefit Funds.

Reports are under way and will soon be issued on:

- The Immigration Problem.
- The Economic Affects of the Anti-Trust Laws.

A work of great value and extreme interest is nearly ready for issue, entitled, "Graphic Analyses of the United States Census of Manufactures." This will contain 130 colored graphic charts with brief text and will give vital census information in a way to be easily grasped.

Weekly publications are the *Industrial News Survey* and the *Service Letter* containing industrial information. These are sent to Board members and financial subscribers. A Wall Chart Service is maintained giving a graphic presentation of vital and outstanding facts of industrial and economic conditions and movements in the United States and foreign countries based on the Board's investigations and on other reliable sources.

It can be readily seen that this great work cannot be carried on without very considerable expense. The budget for this year calls for an outlay of about \$350,000 and for the money the Board must rely on voluntary subscriptions. The amounts contributed by the constituent organizations, as such, constitute a small proportion of the required funds and the balance must be raised from individuals, business and industrial companies, etc. A few of our own members are contributing liberally and your delegates to the Conference Board feel that the service to industry is of such importance that its support deserves your generous consideration.

Respectfully submitted,

FREDERIC S. CLARK.

The report of the Association's representative on the Dyes Committee of the Textile Alliance, Inc., was next presented, as follows:

REPORT OF THE ASSOCIATION'S REPRESENTATIVE ON THE
DYES COMMITTEE OF THE TEXTILE ALLIANCE, INC.

As the representative of the Association on the Dye Committee of the Textile Alliance, I beg to make the following report:

In December, 1921 the United States Government refused to further designate the Textile Alliance as the recipient of the reparation dyes, to which the United States was entitled. As a result of this, it soon became impossible for the Alliance to continue to receive the reparation dyes, and during the past year it has been gradually disposing of the dyes on hand, reducing its force and closing out the business.

A number of meetings of the Committee were held and every effort was made to secure action on the part of our Government so that our manufacturers might continue to receive the reparation dyes, which are the cheapest dyes in the world and which all the other allied powers are still receiving. In this action, however, the Committee was unsuccessful and our government has done nothing to help the situation. The matter stands in this way at the present time—The State Department claims that legislative action is necessary; the leaders in the Senate claim that the Executive has ample authority, and because of the two points of view nothing has been done, and it is not likely that anything will be done. The result is that reparation dyes are no longer available for American consumers.

I regret very much to make this unsatisfactory report, but the facts are as stated.

Respectfully submitted,
FRANKLIN W. HOBBS.

An informal report was made by Mr. Thomas T. Clark on the work of the Committee on Standardization of Cost Factors, in which he referred to a report of progress presented to the Board of Directors at its meeting on November 15, 1922.

Mr. Marland C. Hobbs made a report for the Committee on Definitions which is to be presented to the Board of Directors at its next meeting.

The Nominating Committee then made its report as follows:

REPORT OF NOMINATING COMMITTEE.

PRESIDENT.

JOHN P. WOOD Philadelphia, Pa.

VICE-PRESIDENTS.

WILLIAM M. WOOD Boston, Mass.

GEORGE H. HODGSON Cleveland, O.

FRANKLIN W. HOBBS Boston, Mass.

SECRETARY AND TREASURER.

WALTER HUMPHREYS Boston, Mass.

BOARD OF DIRECTORS.

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FREDERIC C. DUMAINE Boston, Mass.

HAROLD S. EDWARDS Boston, Mass.

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LOUIS B. GOODALL Sanford, Me.

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EDWIN FARNHAM GREENE Boston, Mass.

ARTHUR S. HARDING Philadelphia, Pa.

GEORGE C. HETZEL Chester, Pa.

GEORGE E. KUNHARDT Lawrence, Mass.

CHARLES W. LEONARD Boston, Mass.

JAMES R. MACCOLL Pawtucket, R. I.

ARTHUR E. MASON Boston, Mass.

WILLIAM MAXWELL Rockville, Conn.

OLIVER MOSES Bath, Me.

THOMAS OAKES Bloomfield, N. J.

NATHANIEL STEVENS North Andover, Mass.

WILLIAM H. SWEATT Boston, Mass.

The ballots were passed among the members and after they were collected the Chairman, upon reviewing them, declared that all of the votes cast were for the entire list of nominees as proposed by the committee. The officers and directors were, therefore, declared unanimously elected.

THE FALLACY OF AD VALOREM WOOL DUTIES.

It is often of advantage to discuss a question which has been the subject of controversy, at a time when that question can be considered as having been removed from the vital issues of the moment. The heat of partisan debate, which is apt to enter into any discussion carried on while an actual settlement of the issue is pending, is not so likely to appear when no immediate decision is imminent. At such times the object becomes less of a mere scoring of points with this audience or that group of readers, and more of an analytical examination, in quest of the truth and the exact facts. Vigorous assertion of personal viewpoints may give way to a spirit of calm consideration, and a judicial measurement may be applied to respective claims, with the result that those who are seeking an intelligent comprehension of the merits of opposite opinions readily may obtain it by drawing distinctions between facts and fallacies.

Such is the present status of the proposal that all the duties of the Wool Schedule be levied in *ad valorem* form. For the time being at least, that question has been definitely settled. At its recent session, the Sixty-seventh Congress settled it by rejecting the basic *ad valorem* rate and providing a specific duty for raw wool and compound duties for the manufactures of wool, as has every other Congress in the last fifty years that has placed a duty upon wool.

For a considerable period nothing new has been said—and very probably nothing new can be said—in support of *ad valorem* wool duties. In the tariff discussions of 1913, and again in the hearings which preceded the enactment of the Fordney-McCumber bill, the subject was expounded with ability in all its detail. The effort, however, did not succeed either in 1914 or in 1922 because the greatest ability in exposition cannot bring to the proposal something which it does not possess—equity and practicability in actual application.

Nevertheless the relatively few wool manufacturers and others who advocate that method of levying the wool duties

are very persistent in their promotion of it. To the uninformed they present plausible expositions which lay great stress upon the attractive theoretical advantages of the plan, while completely ignoring, or lightly passing over, the impracticalities and inequities which would be inseparable from it, if attempt were made to put the theory into practice. It may serve, therefore, to promote a clearer understanding of the subject among those who heretofore have given it no detailed study, to present briefly the reasons which prompted the old Taft Tariff Board, the present Tariff Commission, the recent Congress, and every Congress that has made a protective revision of the tariff in the last half century, to support a specific duty for wool, and compound duties for wool manufactures, rather than the basic and compensatory *ad valorem*s which some, but not many, have urged.

In taking up what is logically the first aspect of the subject—that of an *ad valorem* rate on raw wool—it is hardly necessary to make more than passing reference to the two outstanding weaknesses which are inherent in all *ad valorem* rates:

(a) The possibility and even strong probability of undervaluations of imports. These undervaluations may be intentional or unintentional upon the part of the foreign exporter or the domestic importer, and in either event without collusion with customs employes; whereas under specific duties such errors are practically negligible, and fraud almost impossible without the knowledge and assistance of customs agents. Undervaluations, of course, deprive the Government of its rightful revenue and domestic industries of their intended protection.

(b) The variation in the sum of the duty with every change in prices.

Both these evils are inherent in the *ad valorem* rate. Efficient administration of the customs service may minimize the first, but it cannot wholly eliminate or correct it. What is perhaps even more to the point, neither the customs service itself, nor those who are dependent upon it (honest importers and domestic producers alike) for a proper administration and application of the duties, can have any definite knowledge of the extent to which false or erroneous valuations prevail or are restrained, because those which are known are corrected,

while obviously those which are not known to the customs authorities cannot be prevented or corrected.

The second weakness is of the very essence and purpose of the *ad valorem* rate, *i. e.* that it shall render a duty constantly proportional to the price. The duty, therefore, is no fixed sum, but changes as prices change, and is a variant in respect of the previously incurred production cost, the difference between which (foreign and domestic) the duty is supposed to equalize. What is the result? In periods of falling prices, which usually are coincident with general depression, the duty likewise diminishes. Often it falls far below the point of protection. It is then that domestic producers are compelled not merely to meet a market in which prices are depressed because the demand is unequal to the supply, but they are forced to accept further and perhaps ruinous losses when they have to meet the additional competition set up by a foreign product which, in such a situation, can be brought into this country under a duty that has become less than the difference between foreign and domestic production costs.

Upon the other hand, when the reverse condition exists, with prices rising, with business active, and demand for all sorts of products equal to, or perhaps even temporarily in excess of, supply, domestic competition may for a time fail to operate wholly to control or regulate prices as it does in all normal periods. Then it is that foreign competition should flow in at prices equal to American costs, in order to restore to the business situation by natural means those elements which limit profits to a fair and reasonable margin. But under an *ad valorem* rate, constantly proportional to price, the duty increases as world prices advance, so that it may become in effect an embargo against imports. And until the situation again readjusts itself, consumers—of raw materials as well as of finished products—may be compelled to pay prices that include a larger margin of profit than can be taken under conditions of normal competition.

With a raw material like wool, where the production process is subject to the laws of nature and necessarily extends over a long period, so that the industry is not adaptable to quick changes to meet altered economic or market conditions, the effects of these evils in the *ad valorem* rate are likely to be

far worse than in some other industry with shorter periods of turnover and smaller overhead and carrying costs. The complete process in a mill or factory may be a matter of weeks, whereas in sheep raising and wool growing the periods are measured in months and years. A mill may very materially curtail its operating costs by diminished production or by a temporary shut-down, but the wool growing industry cannot be stopped and started at will. Once started, production being a natural, instead of an artificial, process must continue, whether the season of selling promises a profit or loss. And the overhead is a constant factor.

These considerations are entirely apart from those equally important ones which arise from the fact that wool is divided into many grades and classifications, all different in market value at any given time, and each different in its own market value at different times.

For these reasons, practically all of those who are engaged in the wool growing industry, nearly all of those who are engaged in wool manufacture, and a very substantial majority of those who, either as members of Congress or as private investigators of the subject, have studied the question with personal detachment, have adhered to the specific and compound duties—not because those duties are perfect, but because, viewed from every aspect, they involve less injustice and inequity than does the *ad valorem* rate, and are far more dependable, both with respect to Governmental revenue and protection for domestic industry.

But even if all these shortcomings and disadvantages of the *ad valorem* rate for the raw wool were overlooked, or even were non-existent so far as that commodity is concerned, such form of wool duty would present difficulties and obstacles well nigh insurmountable in the determination of compensatory equivalents to protect the wool in finished cloths and fabrics, because in different cloths the value of wool to finished cost varies greatly, and hence an *ad valorem* duty which would be right for a fabric containing exactly the percentage of wool cost that the rate contemplated, would be wrong for all other cloths in which the percentage of wool cost to finished cost was higher or lower. Any attempt to give a specific compensatory duty would result in a duty which would exactly offset

the raw wool cost only when the wool value in fabric was at one fixed percentage of the whole cost, and, if high enough to cover the wool cost in cloths of highest wool value, would be too high for all other cloths of lesser wool value, and would subject the entire wool manufacturing industry, as well as the tariff law of which any such rate was a part, to severe criticism.

A specific compensatory duty for a raw wool *ad valorem* rate being, therefore, practically out of the question, the only examination remaining is that which has reference to an *ad valorem* compensatory rate for an *ad valorem* wool duty. For examination we can take one of the suggestions advanced by a spokesman for the advocates of that method.

Briefly, the suggestion was that the raw wool duty be fixed at 60 per cent; that the compensatory duty be based upon the assumption that a 60 per cent wool value in cloth would be a fair and equitable average for all cloths; and that the protective duty upon finished fabrics be 50 per cent.

Obviously, such a suggestion would have to rest upon the following assumptions: (a) that the finished cost of all cloths, irrespective of weight, texture, workmanship, etc., would be made up of 60 per cent of raw material (wool), and 40 per cent conversion cost; (b) that if the conversion cost of a foreign fabric should be only 40 per cent of its whole cost, and the American conversion cost is greater than the foreign by 50 per cent of the whole foreign cost, then the American conversion cost must be 125 per cent greater than, or 225 per cent of, the foreign conversion cost.

EXAMPLE

| FOREIGN FABRIC. | | DOMESTIC FABRIC. | |
|---------------------|-------|------------------|-------|
| Wool value, | .60 | Wool value, | .60 |
| Conversion, | .40 | Conversion, | .90 |
| | <hr/> | | <hr/> |
| Foreign Cost, | 1.00 | Total, | 1.50 |
| Duty (50 per cent), | .50 | | |
| | <hr/> | | |
| Total, | 1.50 | | |

If the compensatory duty for a 60 per cent raw wool duty is to be based upon the assumption that 60 per cent of the cost of the finished fabric is due to the wool contained therein, then it follows that the flat and arbitrary compensatory *ad*

valorem that would be established would be 60 per cent of the 60 per cent raw wool duty, or 36 per cent.

Assuming these rates to be correct, *i. e.* a 60 per cent duty on raw wool, a 36 per cent compensatory, and a 50 per cent protective duty on finished fabrics, it is evident that we then would have a situation in which these duties would represent an exact adjustment for cloths when, for each dollar of finished cost, 60 cents were spent for raw wool and 40 cents for conversion. But it is equally evident that as the percentages for these items of cost change and the relationship to each other and to the total cost becomes altered, both the protective and the compensatory duties will be out of alignment, rendering a combined duty which will be too great or too little, according as the conversion cost is less or more than the accepted 40 per cent.

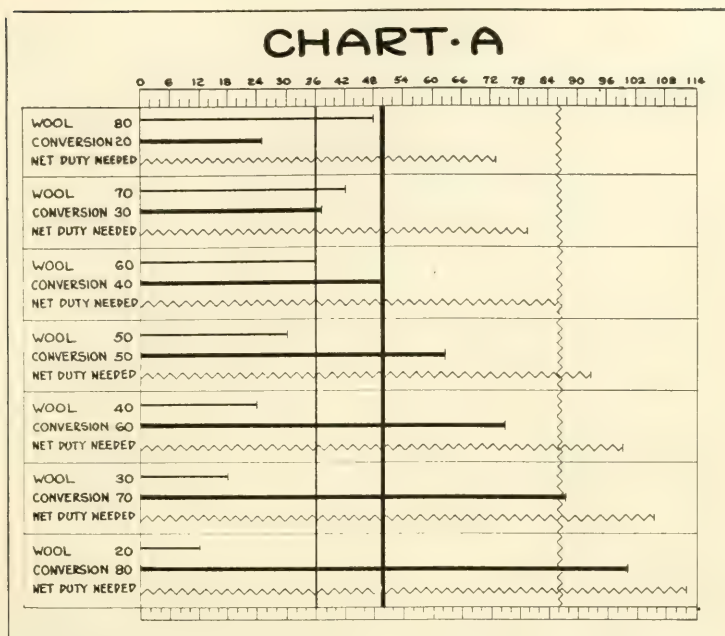
This is perhaps most easily set forth in tabular or chart form.

Table 1 sets forth how, when the percentage of wool value is greater than 60 per cent, and the conversion cost consequently less than 40 per cent, the compensatory rate of 36 per cent would render a duty insufficient to protect the wool in the cloth, while the 50 per cent protective duty (which assumed a 40 per cent conversion cost) would render a duty more protective than would be required, with a net total of the two duties somewhat in excess of the duty that would be needed in such circumstances. It also sets forth how, when the percentage for wool value is less than 60 per cent, and the conversion cost more than 40 per cent, the compensatory rate of 36 per cent would give a duty greater than necessary to protect the wool in the cloth, while the protective duty of 50 per cent would be insufficient, and the whole duty given by the 36 per cent and 50 per cent rates would be less than the sum of duty needed for cloths composed of those cost factors.

Table 1.

| Factors of Cost. | Per cent of total cost of cloth that is attributable to the wool therein, and per cent that represents expense of conversion. | Correct sums of duty (per dollar of value of cloth) necessary exactly to protect the wool in the cloth, under a 60 per cent raw wool duty, and to offset American conversion cost—assuming American conversion cost to be 225 per cent of foreign conversion cost. | Amounts of duty that would be rendered under arbitrary 36 per cent Compensatory, and 50 per cent Protective Duty. | Excess or deficit of necessary duties rendered by 36 per cent Compensatory and 50 per cent Protective Duty. | Net excess or deficit, per dollar value of cloth. |
|------------------|---|--|---|---|---|
| Wool..... | 80 | 48 | 36 | -12 | |
| Conversion..... | 20 | 25 | 50 | +25 | +13 |
| Wool..... | 70 | 42 | 36 | -6 | |
| Conversion..... | 30 | 37½ | 50 | +12½ | +6½ |
| Wool..... | 60 | 36 | 36 | | |
| Conversion..... | 40 | 50 | 50 | | |
| Wool..... | 50 | 30 | 36 | +6 | |
| Conversion..... | 50 | 62½ | 50 | -12½ | -6½ |
| Wool..... | 40 | 24 | 36 | +12 | |
| Conversion..... | 60 | 75 | 50 | -25 | -13 |
| Wool..... | 30 | 18 | 36 | +18 | |
| Conversion..... | 70 | 87½ | 50 | -37½ | -19½ |
| Wool..... | 20 | 12 | 36 | +24 | |
| Conversion..... | 80 | 100 | 50 | -50 | -26 |

Chart A presents the same data in somewhat different form, and perhaps more easy to visualize.



KEY TO CHART A.

The top line of figures, pointed off in multiples of 6 merely for convenience, represents ad valorem duties. The thin vertical line dropped from the numeral 36 represents the arbitrary compensatory duty that would be accorded all cloths under a 60 per cent raw wool duty and the assumption that the wool represents 60 per cent of the cost of the cloth (60 per cent of the 60 per cent wool duty equals a 36 per cent compensatory duty). The heavy black vertical line dropped from the 50 point in like manner represents the proposed 50 per cent manufacturing, or protective, duty, on the same theory that American conversion cost is 125 per cent greater than (or 225 per cent of) the foreign conversion cost.

The wavering vertical line dropped from the 86 point indicates the stationary sum of net duty that would be accorded all cloths by the two ad valorems, 36 per cent and 50 per cent.

Assuming a 60 per cent raw wool duty, and that the domestic conversion cost is 125% higher than (or 225 per cent of) the foreign conversion cost, the horizontal lines (light for compensatory, heavy for protective, and wavering for the net of these two) show the correct amounts of duty that would be required for cloths in which the wool and conversion costs were of different percentages.

The extent by which horizontal lines fail to meet like vertical lines represents the excess of duty over that actually needed, that would be given by the 36 per cent compensatory and 50 per cent protective duties. The extent by which horizontal lines exceed like vertical lines indicates the amounts by which the 36 per cent compensatory and 50 per cent protective duties would fail to give the needed sums of duty.

Chart B shows the difference between the sums of duty that would be needed, and those that would be given by a 36 per cent and 50 per cent duty, for cloths of different values (a) when the wool value is 60 per cent and the conversion cost 40 per cent; (b) when the wool value is 40 per cent and the conversion cost 60 per cent.

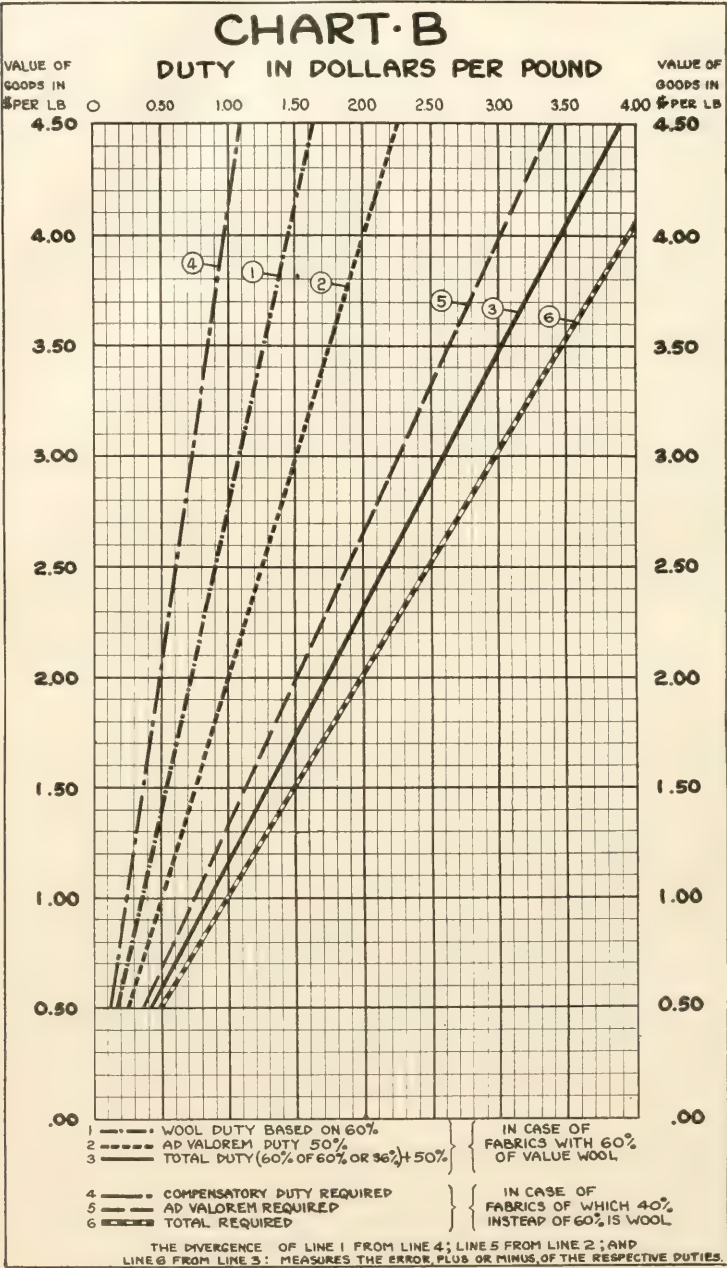
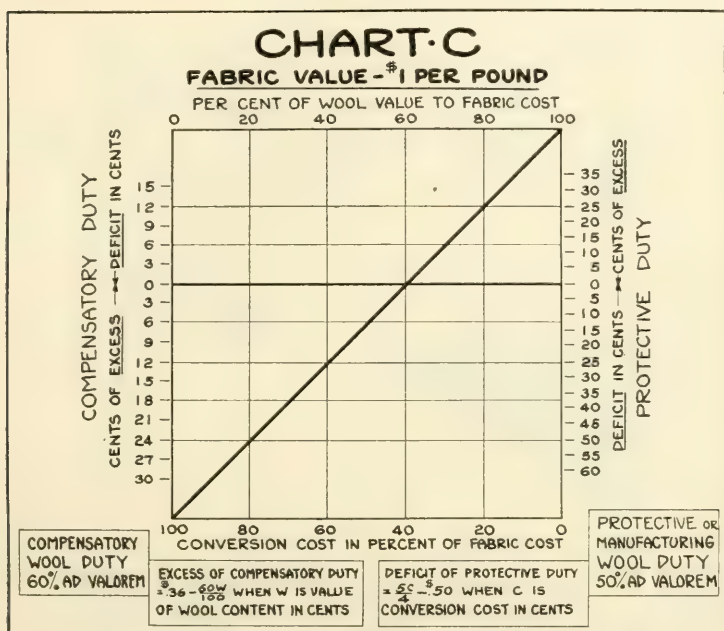


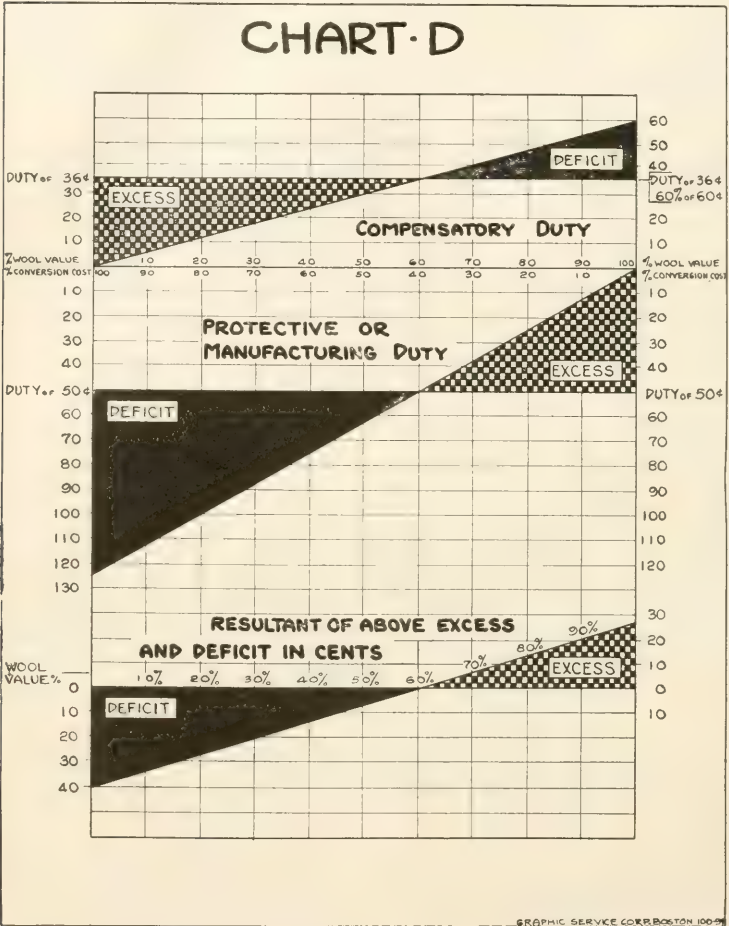
Chart C is a different presentation of the facts set forth in Table 1 and Chart A, particularly stressing the excesses and



inadequacies of duties that would result from *ad valorem*s based upon a 60 to 40 per cent assumption, when applied to cloths of other ratios.

Chart D graphically illustrates the divergence of the duties.

These are some of the more important weaknesses and inequities of *ad valorem* rates for wool and the manufactures thereof, which far outweigh all of the theoretical advantages that can be advanced in favor of the proposal. An examination of the facts gives convincing proof that even if an *ad valorem* rate on raw wool were practicable (which it is not), it would be impossible to establish an equitable or effective compensatory duty for the protection of the wool in the cloth.



This latter difficulty the advocates of the *ad valorem* rate admit, but they attempt to put it aside with the statement that the divergence of duty is slight and not of much importance. The tabular and chart presentation offered herewith shows that the divergence is a very substantial one, and that the excesses or inadequacies of duty would become of very great importance.

REPORT OF THE COMMITTEE ON STANDARDIZATION OF COST FACTORS OF THE NATIONAL ASSOCIATION OF WOOL MANUFACTURERS.

AT its meeting on July 26, 1921 the Board of Directors of the National Association of Wool Manufacturers authorized the president to appoint a committee "to study problems of production cost, including depreciation and obsolescence, with a view to recommending standard rates for these elements of cost, and uniformity in the methods of determining the factors of cost." The president appointed a Committee on Standardization of Cost Factors, which met in Boston for its first meeting on December 19, 1921. The members of this committee are: Mr. George C. Hetzel, Chairman, and Messrs. T. W. Andrews, Thomas T. Clark, Donald R. Green, Marland C. Hobbs, William B. MacColl and Abbot Stevens.

At the annual meeting of the Association held in Boston on February 8, 1922 the Committee made a report of progress giving a review of the suggestions made by the President for a program to be undertaken by the committee. It summarized the work accomplished up to that time. In that report it was noted that the committee had been sub-divided into three groups covering, respectively, raw material, labor, and overhead and general expense. Two additional sub-committees were appointed to consider the problems of depreciation and obsolescence.

At the September, 1922, meeting a formal report of progress was discussed, and with certain changes was adopted.

The purpose of the report is not to set up standards of cost but to present an interpretation and classification of the elements, or factors, of cost which will lead to the introduction of standardized and more accurate accounting methods. Guesswork may thus be eliminated, wastes more carefully watched, increased production stimulated, and, in general, greater efficiency secured. All this is directed toward the final goal of creating a larger demand for wool products by decreasing their price through a lessening of their cost.

The Committee has classified the cost factors into five general groups, as follows:

1. Raw Materials.
2. Direct Labor.
3. Indirect Labor.
4. Supplies.
5. Overhead Expense or Burden.

1. RAW MATERIALS.

Raw materials shall be limited to any textile fibers in whatever form used by the particular mill, plus freight and handling, or delivery charges.

Examples:

- (a) For a carded woolen mill: raw wool, wastes, cotton, rags, reworked wool, noils, etc.
- (b) For a top making mill: raw wool.
- (c) For a worsted spinning mill: raw wool or tops.
- (d) For a worsted weaving mill: worsted, wool, cotton, silk, or other yarns.

2. DIRECT LABOR.

Direct Labor is divided into the following two classes:

- (a) Direct Productive which comprises all labor chargeable upon the basis of its direct production.
- (b) Direct Non-Productive which comprises all other labor facilitating production in one way or another and chargeable to a production group, center, or department on the basis of a percentage of the productive labor or upon the basis of a unit of product, such as a yard or a pound.

This method of classification assumes that in a particular department or production center of the factory all the labor, productive and non-productive, is concerned directly with the process in that department or center. In the weaving department, for example, the Direct Productive labor would be the weavers, while Direct Non-productive would include harness builders, chain builders, loom fixers, filling carriers, perchers, general help in the department, etc.

3. INDIRECT LABOR.

Indirect Labor comprises all labor chargeable to other cost factors and includes general labor which is not employed exclusively in a particular department, such as carpenters, machinists, cleaners, etc. It is chargeable to overhead expense or burden. A definite suggestion for the distribution of these three types of labor is given in Exhibits A and B, which comprise substantially all occupations in carded woolen and worsted mills.

4. SUPPLIES.

(a) Direct Supplies are those directly chargeable to a particular operation, for example, dyestuffs, chemicals, acids, etc., used in dyeing are charged to the Dyeing Department, and others, such as soap and oils used in fulling, to Wet Finishing.

(b) Indirect Supplies are all supplies which are not used in any particular operation or department, such as stationery, pencils, brooms, lubricating oils, etc. These are chargeable to Overhead.

5. OVERHEAD EXPENSE, OR BURDEN.

Overhead Expense, or Burden, is that part of the items of expense, in Exhibit C, which is not distributed directly to any material, job, or production center.

INTEREST.

The item of Interest provoked much discussion. Authorities upon cost accounting appear to be hopelessly divided as to whether or not this is a proper item to include in production cost, both sides being equally emphatic, sure of their ground, and scoffing at the attitude of the other. The Committee, however, after weighing the evidence, concluded that for purposes of cost comparison, interest on invested capital should be included. On the theory that such capital has an earning power entirely apart from, and independent of, profit, and that before it can be determined what part of net earnings is derived from manufacture, the Committee believes interest should be included in the cost of manufacture.

DEPRECIATION AND OBSOLESCENCE.

The recommendations concerning a reasonable allowance for depreciation and obsolescence were arrived at from a study of tabulated statements of the estimated profitable life of the various classes of machinery. These were based upon information gained by members from the experience of the companies with which they were associated. The figures were averaged and the averages of the several groups were submitted to machinery builders for opinions as to their approximate accuracy. It follows, necessarily, that the life of machinery is directly related to the care it receives and the constancy of its operation. The figures given in Exhibit D are based upon the assumption of reasonable care and fairly continual use. The figures are given in groups in order that they may be applied in separate departments according to the accounting method employed. They may be converted into one round percentage, or weighted average, by multiplying the total value of the machinery in each department, or group, by the percentage figure in the last column and dividing the sum of the products by the grand total of values.

The Obsolescence figures, as given in the table (Exhibit D), are arbitrarily assumed. It is certain that there is such a thing, but it is equally certain that there is no known way to measure it.

For buildings the following percentages are recommended for depreciation per annum:

| | |
|---|-----|
| Reinforced concrete, | 2% |
| Steel and brick, wood floors, | 2½% |
| Brick or stone walls, wood frames, and floors, | 3% |
| Wood or corrugated iron, | 5% |

REPAIRS, MAINTENANCE, RENEWALS, REPLACEMENTS.

After extended discussion as to the proper accounting treatment of Repairs, Maintenance, Renewals, and Replacements a Memorandum as to Expenditures on Plant (Exhibit E) was

adopted by the Committee as a guide to the principles to be followed.

Selling cost factors have not been considered by the Committee since merchandising is a problem of its own, having nothing to do *per se* with manufacturing cost factors and the selling methods are so varied. Some mills have complete organizations of their own; some sell on a brokerage basis, and others sell through commission merchants on a flat commission percentage on sales, with or without a guaranty of accounts.

The cost factors enumerated comprise all the elements of factory production cost and should be so allocated in cost accounting systems employed in the various branches of wool manufacture that they may afford ready comparison with weekly records of actual costs. In this way variations may at once become the subject of investigation which may lead to the discovery of leaks or suggest methods of economy. It goes without saying that no cost system however good can be of value unless frequent comparisons be made between the expected and the actual.

In an industry, such as wool manufacture, having a production capacity at all times equal to and often exceeding the full demands of the population and with sales limited to the home market, the consequent competition is so intense that it is of first importance to know the cost of production as nearly as may be in order that prices will neither be made so high as to prevent sales nor so low as to cause serious losses.

In cloth manufacture, especially, styles and fabrics change so frequently that almost every season presents new problems, and it is only through the most carefully kept records that costs can be estimated with any degree of confidence as the basis for the customary seasonal sales, often made far in advance of manufacture.

Moreover, this keen competition makes it essential that prices shall be based upon costs calculated upon full time operation of plant, and it is self-evident that such full time operation cannot be secured unless prices can be made attrac-

tive to buyers through the economies and efficiency which
accurate cost records are certain to promote.

For the COMMITTEE ON STANDARDIZATION OF COST FACTORS.

GEORGE C. HETZEL, Chairman

T. W. ANDREWS

THOMAS T. CLARK

DONALD R. GREEN

MARLAND C. HOBBS

WILLIAM B. MACCOLL

ABBOT STEVENS

Exhibit A.

CLASSIFICATION OF LABOR AMONG DEPARTMENTS, OR GROUPS, IN A WOOLEN MILL.

| Department or Group. | Direct Productive. | Direct Non-productive. | Indirect. |
|--|---|---|-----------|
| WOOL SORTING | Sorter | Overlooker or inspector Weigher General help | |
| WOOL SCOURING, DRYING AND CAR- BONIZING | Feeder Scouring machine tender Acid tank tender Extractor man Dryer man | General help | |
| STOCK DYEING | Open tub man Stock dye machine tender Yarn dye machine tender Extractor man | Drug man General help | |
| PICKING AND CARDING | Burr picker tender Mixing picker tender Rag picker tender Duster man Garnett machine tender Breaker tender Finisher tender Card feeder | Waste sorter Card stripper Card grinder Roving weigher General help | |

Exhibit A—Classification of Labor Among Departments, or Groups, in a Woollen Mill. (Continued)

| Department or Group. | Direct Productive. | Direct Non-productive. | Indirect. |
|--------------------------------|---|--|-----------|
| SPINNING AND TWISTING | Mule spinner Twister tender | Mule fixer Roving carrier Yarn weigher Yarn carrier Waste sorter Spool strippers (cleaners) General help | |
| SPOOLING, WINDING AND DRESSING | Yarn spooler Skein winder Cap winder Bobbin winder Dresser tender, wet frame Dresser tender, dry frame Slasher tender | Yarn weigher Slasher helper Beam fixer Size mixer General help | |
| DRAWING-IN AND WEAVING | Drawer-in Hander-in Twister-in Weaver | Harness builder Loom fixer Chain builder Harness raiser (overlooker) Cloth and bobbin carrier Filling carrier Yarn steamer Drop wire adjuster Waste sorter Percher Marker and numberer General help | |

BURLING AND MENDING

Burler
Mender

Examiner

Mender examiner

General help

DYEING AND FINISHING

Tacking machine

Fuller

Scourer

Dye kettle man

Gig tender

Napper tender

Acid tank man

Carbonizer dryer

Extractor

Dryer tender

Shear tender

Brush tender

Steamer tender

Rotary press tender

Decating

Hydraulic press tender

Finish examiner

Specker

Finish sewer

Measurer

Folder, roller or putter-up

Soap mixer

Drug man

Teasel setter

Rough examiner

Caser and trucker

General help

GENERAL

First class engineer
Second class engineer
Third class engineer
Oiler
Electrician
First class fireman

Exhibit A—Classification of Labor Among Departments, or Groups, in a Woolen Mill. (Continued)

| Department or Group. | Direct Productive. | Direct Non-productive. | Indirect. |
|----------------------|--------------------|------------------------|--|
| | | | Second class fireman Third class fireman Unlicensed fireman Watchman Yard laborer Teamster Chauffeur (for trucks) Carpenter Painter Blacksmith Tinsmith Machinist Piper Mason Helper Elevator man Box maker Nurse |

Exhibit B.

CLASSIFICATION OF LABOR AMONG DEPARTMENTS, OR GROUPS, IN A WORSTED MILL.

| Department or Group. | Direct Productive. | Direct Non-productive. | Indirect. |
|----------------------|---|--|-----------|
| WOOL SORTING | Sorter | Overlooker or inspector Weigher General help | |
| PREPARING | Feeder Lap man | Section hand Can man General help | |
| CARDING | Card feeder Baller Duster | Section hand Card clothier Card fixer Card grinder Card stripper General help | |
| COMBING—FRENCH | First gilling Second gilling Third gilling Comber Two comb tender One comb tender Back washer | Section hand Assembly Oiler and finisher General help | |

Exhibit B—Classification of Labor Among Departments, or Groups, in a Worsted Mill. (Continued)

| Department or Group. | Direct Productive. | Direct Non-productive. | Indirect. |
|---------------------------|--|---|-----------|
| COMBING—BRADFORD | Back wash tender First gilling Second gilling Ball winder (punch box) Comb minder Gill box tender Finishing box tender | Section hand Comb fixer Pinsetter for gills Pinsetter for combs Top weigher Top packer General help | |
| TOP, SLUB AND YARN DYEING | Top dyeing machine tender Slub and yarn dyeing machine tender | Drug man General help | |
| DRAWING—FRENCH | Drawing gill tender Baller Drawing frame tender Reducer Slubber Intermediate Rover Finisher | Section hand General help | |
| DRAWING—BRADFORD | Can gill box 2-Spindle box 1st and 2d drawing | Section hand Helper (assistant section hand) | |

| | | |
|-----------------------|---------------|--------------------------|
| RING SPINNING | Weight box | Weight box |
| | Finisher box | Oiler |
| | Cone finisher | Doffer |
| | Cone reducer | Roving hand |
| | Dandy rover | General help |
| | Speeder | Section hand |
| | Spinner | Doffer |
| | | Bobbin setter |
| | | Band fixer |
| | | General help |
| CAP SPINNING | Spinner | Section hand |
| | | Section helper |
| | | Tester |
| | | Rewinder |
| | | Yarn sorter (examiner) |
| | | Doffer |
| | | Bobbin setter |
| | | Packer |
| | | General help |
| | | Section hand |
| FRENCH SPINNING | Spinner | Doffer |
| | Joiner | Packer |
| | Piecer | General help |
| | Creeler | |
| DOUBLING AND TWISTING | Doubler | Section hand |
| | Twister | Tape fastener (band boy) |
| | | General help |

Exhibit B—Classification of Labor Among Departments, or Groups, in a Worsted Mill. (Continued)

| Department or Group. | Direct Productive. | Direct Non-productive. | Indirect. |
|-------------------------------|--|--|-----------|
| REELING, WINDING AND SPOOLING | Winder Skein winder Skein spool winder Jack spooler Reeler | Section hand General help | |
| DRESSING | Dresser tender Warp splitter Long chain beamer Slasher warper Slasher tender | Section hand Slasher helper Beam fixer Size mixer General help | |
| WEAVING | Warp tying machine Twister-in Drawer-in Hander-in Weaver | Harness builder Leaser Chain builder Drop wire adjuster Loom fixer Harness raiser Cloth and bobbin carrier Filling carrier Cloth percher Waste sorter General help | |

| | | |
|--|-------------------------|-------------------------|
| BURLING, MENDING AND GRAY ROOM | Burler | Section hand |
| | Mender (sewer) | Marker |
| DYEING AND FINISHING, CRABBING AND STEAMING | Crabber | Examiner |
| | Steamer | Stock man |
| SCOURING, FULLING AND TACKING | Sewer | Sewing machine tender |
| | Tacking machine tender | General help |
| DRYING | Scourer | Section hand |
| | Scutcher | Soap mixer |
| SINGEING | Sewer | Teasel setter |
| | Fulling machine tender | |
| DYEING | Gig tender | |
| | Napper tender | |
| SINGEING | Can dryer | Section hand |
| | Pin dryer | |
| DYEING | Dewing machine tender | |
| | Singeing machine tender | Section hand |
| DYEING | Beaming machine tender | |
| | Kettle hand | Foreman |
| | | Color mixer or drug man |

Exhibit B—Classification of Labor Among Departments, or Groups, in a Worsted Mill. (Continued)

| Department or Group. | Direct Productive. | Direct Non-productive. | Indirect. |
|---------------------------|--|---|-----------|
| JIGS AND PADS | Padder Vacuum extractor Scutcher Basket extractor Sewer | Foreman | |
| CARBONIZING | Carbonizing machine tender Sewer | Foreman | |
| DYE HOUSE EXAMINING | Sewer Specker Finished mender | Section hand Percher | |
| SHEAR DEPARTMENT | Shear tender Napper tender Brusher | Section hand | |
| PRESSING AND DRY STEAMING | Rotary press tender Hydraulic press tender Decatizing machine tender Steam helper | Section hand General help—wet finishing General help—dry finishing General help—dyeing | |

Cloth examiner
Measurer
Winder
Weigher
Shader

Maker-up
Packer
Baler
Caser and trucker
Pattern maker
Machine sewer
Stamper
General help

GENERAL

First class engineer
Second class engineer
Third class engineer
Oiler
Electrician
First class fireman
Second class fireman
Third class fireman
Unlicensed fireman
Watchman
Yard laborer
Teamster
Chauffeur (for trucks)
Carpenter
Painter
Blacksmith
Tinsmith
Machinist
Piper
Mason
Helper
Elevator man
Box maker
Nurse

Exhibit C.

OVERHEAD EXPENSE OR BURDEN.

Overhead Expense or Burden is that part of the following items which is not distributed directly to a material, job, or production center.

1. *Taxes.*

- (a) Property Tax (Town or City).
- (b) State Franchise Tax.
- (c) Federal Capital stock tax.
- (d) Miscellaneous Federal taxes.
(in substance of taxes except profit taxes).

2. *Insurance.*

- (a) Fire, Theft, Use and Occupancy, etc.
- (b) Employers Liability, Life, Health, Workmen's Compensation, etc.
- (c) Pensions.

3. *Interest.*

- (a) For purpose of cost comparison, interest on the invested capital must be included.

4. *Rent.*

- (a) Only rent actually paid.

5. *Depreciation and Obsolescence.* For Buildings as in Section 5, above, and for Machinery as in Exhibit D.

6. *Executive, Administrative and General Factory Expenses.*

- (a) Official's salaries and office expense.
- (b) Salaries of Agents, Superintendents, Designers, etc.

7. *Service.*

- (a) Power, light, and heat.

8. *Repairs and Maintenance.*

- (a) All repairs which are not directly located.

9. *Supplies.* Those defined as Indirect Supplies in Section 4 (b).

10. *Indirect Labor.*

- (a) That labor which is not classed as Direct Productive or Direct Non-productive.

11. *Freight.*

- (a) All freight that is not charged directly with the material, or the finished product.

Exhibit D.

OBsolescence AND DEPRECIATION.

| | Length of Profitable Life. | Rate of Depreciation. | Arbitrary Rate for Obsolescence. | Total Rate of Depreciation and Obsolescence. |
|----------------------------|----------------------------------|--------------------------|--|--|
| | <i>Years.</i> | <i>Per Cent.</i> | <i>Per Cent.</i> | <i>Per Cent.</i> |
| Scouring and Drying..... | 25 | 4 | 1 | 5 |
| Cards..... | 30 | 3 1/3 | 1 2/3 | 5 |
| Combs..... | 25 | 4 | 1 | 5 |
| Roving..... | 25 | 4 | 1 | 5 |
| Spinning and Twisting..... | 25 | 4 | 1 | 5 |
| Spooling and Warping..... | 30 | 3 1/3 | 2/3 | 4 |
| Looms..... | 25 | 4 | 1 | 5 |
| Finishing: | | | | |
| Wet Finishing..... | 15 | 6 2/3 | 1/3 | 7 |
| Dry Finishing..... | 25 | 4 | 1 | 5 |
| Dyeing..... | 10 | 10 | .. | 10 |
| Transmission: | | | | |
| Shafting..... | 35 | 2.85 | * | .. |
| Motor..... | 20 | 5 | 1 | 6 |
| Boilers..... | 20 | 5 | 1 | 6 |
| Engines..... | 25 | 4 | 1 | 5 |
| Electric generators..... | 20 | 5 | 1 | 6 |

*Same as machine to which applied.

Exhibit E.

Memoranda as to Expenditures on Plant.

Expenditures on manufacturing plants are commonly divided as follows:

- (1) Land, Buildings, Machinery, and Equipment.
- (2) Repairs and Maintenance.
 - (a) Ordinary Repairs.
 - (b) Extraordinary Repairs.
- (3) Renewals and Replacements.

There are two fundamental purposes in making the above divisions:

1. To keep a fair record of the value of the plant that it may be included in statements of financial condition to establish credit and to determine insurance and tax values.
2. To charge to expense in each accounting period a proper amount to be included in the cost of manufacture of that period.

(1) LAND, BUILDINGS, MACHINERY, AND EQUIPMENT.

This account starts with the original plant. Any additions which increase the capacity of the plant should be added. The account should properly include only new land, new buildings, new machinery, and equipment. It is customary to add to the book value of machinery and equipment only such as have an estimated life of several years. Equipment, such as tools, etc., which have a life of not more than from one to three years, are customarily charged into General Expense of the period in which they are bought. This would result in the charging off of a fairly average amount from year to year. Necessarily the question of classification is a matter of judgment in many cases.

(2) REPAIRS AND MAINTENANCE.

Maintenance primarily signifies labor cost connected with the upkeep of a plant, such as watchmen, janitor, and cleaning service.

Repairs are commonly divided into Ordinary Repairs and Extraordinary Repairs.

Ordinary Repairs consist of repairs of a frequently recurring nature which add nothing to the previous value or efficiency of the plant. Such repairs maintain a fairly constant standard of efficiency.

Extraordinary Repairs similarly maintain the same standard of efficiency. Practically the only difference between Ordinary and Extraordinary Repairs is that the Extraordinary Repairs are needed only because of unusual or accidental causes, or are incurred at such long and infrequent intervals that they ought not fairly to be charged wholly to General Expense or Manufacturing Cost of the particular period in which they were made. Such expenditures should be charged directly to Profit and Loss, or charged in suspense and divided over a period of say, three, four, or five years. If the expenditures should be extended over a longer period than that, they would merge into the class of Renewals. The distinction is often hard to draw and it is matter of judgment in each case how to treat the expenditure, or over how long a period to distribute it.

(3) RENEWALS AND REPLACEMENTS.

From a practical point of view it is impossible to lay down a rigid line of separation between repairs, both ordinary and extraordinary, and renewals and replacements. The chief grounds for distinction are based on relative magnitude and the effect upon length of life of the building or machine dealt with. Repairs, renewals and replacements are required solely because of wear and tear or obsolescence of a plant. As stated before, repairs are customarily charged to General Expense, either at once or by being spread over a short period. Depreciation as commonly used in accounting refers to general wear and tear which ultimately results in a building or machine being worn out and discarded, in spite of the ordinary repairs which may have been made on it.

RESERVE FOR DEPRECIATION.

A renewal or replacement restores the efficiency of a plant

as against the wear and tear which cannot be taken care of by repairs. It would seem that nothing should be called a renewal or replacement which does not prolong the life of the building or machine substantially as if it were new, or at least for a period of years which can be estimated with reasonable definiteness. A Reserve for Depreciation is set up for the sole purpose of taking care of such renewals and replacements, and they should, therefore, be charged against such Reserve. In the case of a renewal or replacement, both the plant account and the reserve for depreciation should be adjusted on the books in order that the accounts may be kept in proper relation to one another. In the case of a growing plant it frequently happens that any renewal or replacement involves a much larger expenditure than the cost of the thing replaced. In such a case insufficient depreciation will have been credited to the Reserve for Depreciation to take care of the full replacement, and only a fair proportion of the new cost should, therefore, be charged against the Reserve for Depreciation. The balance should be added to the book value of the plant, less any salvage value of the building or machine replaced. Unless proper relationship is maintained between plant account and the Reserve for Depreciation the results are likely to be misleading. In determining net value for credit purposes it is customary to deduct the Reserve for Depreciation from the book value of the plant. Excessive charges against the Reserve, while having the effect of increasing the net value of the plant determined in the above stated manner, might, nevertheless, leave the Reserve so small in comparison with the book value of the plant as to raise some question as to the adequacy of the Reserve in the minds of persons familiar with the age of the plant. Furthermore, as it is customary to figure depreciation on full book value of plant and not on net value (i. e. after deducting Reserve), failure to make proper additions to the book value of the plant results necessarily in charging inadequate depreciation. In case of sale or recapitalization of a plant, or in case of fire loss it is of the utmost importance that the plant account shall state the full value of the plant as accurately and completely as possible, and not by adjustment through a reserve. It is a familiar fact that insurance appraisers do not depre-

ciate buildings and machinery at anything like the rate that accountants do.

While it is a matter of judgment as to how closely such things should be followed, there does not seem to be any inherent difficulty in keeping a proper record of the history of each building and machine without undue labor and expense.

A replacement of a part of a machine, no matter how important it may be, should not be treated as a replacement for accounting purposes, as distinguished from being a repair, unless it results in a renewal of the life of the whole machine. In the ordinary case, the life of the other parts of the machine would not be in any way prolonged by the addition of the new part and it would seem that the term "Replacement" should be applicable only to a complete productive unit. This does not mean that any complete operating unit, such as a pump or feeder, which is accessory to a larger machine, should not be treated as a distinct unit, provided that it can have a useful existence in combination with other operating units whether of the same or a different makeup, after the original machine to which it is accessory becomes worn out or is discarded for any reason.

FIFTY-EIGHTH ANNUAL CONVENTION OF THE NATIONAL WOOL GROWERS ASSOCIATION.

THE fifty-eighth annual convention of the National Wool Growers Association was held in Spokane, Washington, on January 24-26, inclusive. President Ernest O. Holland of the Washington State College at Pullman, Washington, delivered the address of welcome, which was responded to by Senator C. H. Williams of Montana. President Frank J. Hagenbarth of Idaho delivered his annual address in which, after making some local allusions to the meeting of the Association in Spokane, and referring to the Government's land and agricultural policy in the past, said in part:

Deflation was necessary. It had to come. It should have been begun immediately after the signing of the armistice in November, 1918. We can all see that now, but wise men, statesmen presumably fitted to guide the destinies of a nation, should have been wise enough to have foreseen the results of the wild orgy of inflation which took place in 1919. On the contrary, the mad dance went on and the music became wilder and wilder, and on May 18, 1920, Secretary Houston and the Federal Reserve Board decided overnight that it was time to pay the fiddler. And we have paid.

For every dollar borrowed and spent in the wild spree for eighteen months following the armistice, the producer and the borrower during the next ten years must pay \$3 in his products and labors. On May 17, 1920, wool was worth from fifty to seventy cents a pound, according to grade, and sheep were worth from \$15 to \$20 per head, according to quality. Then came the overnight dictum of the Federal Reserve Board, and it was a singular coincidence that on May the 19th, two days later, wool had lost its value and could not be sold or borrowed upon. During the next two years sheep values and cattle values were cut in half.

Finally the loss of foreign markets through disorganization abroad following the war and through the depreciation of foreign exchange, coupled with lack of buying power of the farmer, brought the nation at large to thought. It took well nigh two years for Congress and the general thinking public to awaken to the realization that until agricultural conditions were bettered and the buying power of the farmer was restored, national prosperity could not be had. The national

financial stress became so great and the lack of buying power was so manifest that Congress and the nation began an acute analysis of the underlying conditions. One of the first results of this new thought was a revival of interest in our national agriculture. Like Rip Van Winkle, taking a sleep of nearly a century, this revived interest in agricultural conditions has resulted in

LEGISLATION RECENTLY ACCOMPLISHED.

The first active step taken by Congress was the enactment of an agricultural emergency tariff. In the tariff governing the import policy of this government since 1913, the major portion of agricultural commodities, including wools, live stock and other vital products, was on the free list, subject to the open and unrestricted competition of the world, which was producing on a depreciated foreign exchange cost and selling to us on a foreign enhanced gold price, thus automatically giving the importer a bonus on imports as against the American producer. Congress likewise passed in rapid succession laws providing for the extension of the War Finance Corporation, packer control and stock yards act, co-operative marketing (Capper-Volstead law), control of grain exchanges, and finally the tariff act which gave full recognition to agriculture. Prior to this, legislation had been effected creating farm loan banks, joint stock land banks, and providing for national warehouses which enabled farmers to store their non-perishable products for credit purposes.

Following David Houston, E. T. Meredith of Iowa became the Secretary of Agriculture and immediately set about a reconstructive program. With the new administration came Henry C. Wallace, likewise of Iowa, who bids fair to become one of the country's greatest Secretaries of Agriculture. Secretary Wallace is not only the faithful and constant guardian of the interests committed to his care, but he likewise has the confidence and respect of the entire country.

During this period of reconstruction, I am proud to say that your organization, through its officers, strongly backed by its membership, performed a leading part. Through your efforts was perhaps laid a foundation for much of the good which has been accomplished. In this connection I wish to give recognition to the American Farm Bureau Federation and to its splendid ex-president, James R. Howard, and its Washington representative, Gray Silver, sterling men and a splendid conservative organization. I take the greatest of pleasure in urging upon you at all times and in all places to back up and sustain the American Farm Bureau. They have done, and will continue to do a great work.

In addition to legislation already effected by Congress, there are other measures now being formulated and debated looking to the betterment of agricultural conditions. We will pass the wool woven fabric bill, the rural credits bill, and others of lesser importance. These we will discuss later.

Congress was not alone in its efforts to aid and assist our industry. Before Congress could act, it had become apparent that unless financial relief was forthcoming which would bridge many of the agricultural communities over a period to better condition, not only agriculture itself, but all or nearly all of the agricultural banks would go under. In fact, failures of these banks became alarmingly frequent. Spurred on by this necessity the banks and bankers of the country came to the rescue.

In 1920 and 1921, many of the big banks of the East subscribed to various pools for the purpose of making loans to livestock banks and loan companies. They pledged their credit at various times up to a maximum of \$75,000,000. The main effect of these voluntary offers of assistance upon the part of the banks was psychological and served to settle the situation. However, the will to do so was there and we should be proud of the fact that although the banker is usually looked upon as cold-blooded and heartless, yet in time of crisis and emergency, we find that he is as human as the rest of us. It has been largely the fashion in live stock organizations to condemn the banks. This to a great extent comes from the fact that banks often refuse credit where it is not warranted. It would have been far better for many of us had the banks begun earlier to enforce this rule. Too much credit is about as bad as no credit, and the only just criticism which we should direct against the banks is that they were too liberal with their credits. Personally I am in a position to know that certain of the large bankers of the country went far beyond any reasonable limit in their endeavors to assist the live stock industry especially, and I desire to pay this tribute to them. I know of one banker in Chicago who did not have a live stock account in his bank, and who, upon being placed in possession of a knowledge of the dangers and hardships that were being endured by the producers, voluntarily subscribed one million dollars to a live stock fund to be loaned to the producers. This man was considered a hard and level-headed banker, but he had a heart as well as a head, as have many others of our banking friends.

Not only the banks, but manufacturing, railroad, and other industrial agencies felt the pinch of adverse conditions and being unable to correct or solve the European problems, or to restore foreign markets, they all turned to a favorable

consideration of domestic problems. These interests began to see that the United States, if her industries are properly conserved and protected, is within herself entirely self-sustaining. A program, having for its slogan, "America first," was rapidly developed. The foreign situation was largely discounted. * * *

AGRICULTURAL BLOC.

There is no such thing as an agricultural bloc. If we can call it a bloc, let us call it "a bloc for national prosperity." The group of men in Congress who brought themselves together, regardless of partisan politics for purposes of reconstruction and saving of America for Americans, passed relief measures for the betterment of agricultural conditions, believing that agriculture was America's chief and most lasting source of wealth. * * *

It has been stated by certain writers who have entirely misconstrued the agitation for agricultural relief, that the farmer was developing a new school of thought which we can designate as Collectivism.

Such a belief is wholly erroneous. There is no group of citizens more given to individualism than is the farmer. He does not believe in, or ask for class legislation. He opposes communism, socialism, paternalism, or any kindred beliefs, which ultimately lead to government ownership or nationalization of industries. In fact, the farmer's chief troubles have arisen from individualism and lack of organization. He has had to face organizations of interests economically adverse to him. He has seen labor unions, railroads, the banks organized and grouped together for the purpose of adequate protection of their various interests. He has seen the country ruled by politicians and has witnessed statesmanship become extinct. He has read meaningless party platforms. On two different occasions since 1892, he has seen New England manufacturing interests oppose proper recognition of agriculture.

The time has now come when the farmer, not because he believes in collectivism, or communism, or socialism, but prompted by the first law of nature, self-preservation, finds a necessity for combatting his economic enemies through organization and co-operation the twin sisters of success and progress. At so recent a time as during the past year, events have shown us very plainly what we as sheepmen are losing as a result of not being better organized and having a budget adequate to do the work required.

The grossest misrepresentations regarding the effect of the wool tariff and the position of the wool growers were given

widest circulation in the press, both in newspaper column and in paid advertising. These misrepresentations were made by large cosmopolitan newspapers who sell their principles as well as their advertising space. The maximum amount which your organization could spend, not to advance our interests as wool growers, but simply to offset erroneous and misleading propaganda, was less than \$1,000—this negligible amount to serve the interests of men whose production alone has a value of nearly one hundred fifty million dollars per year. * * * *

COSTS OF DISTRIBUTION.

The January, 1922, government report made by the Department of Agriculture shows that the retail butcher gets 18.8 cents gross profit on each dollar of his sales, or 23 per cent of his cost prices. However, in this connection, we must bear in mind that his turnover is rapid and effected many times during the year. We must also remember that there are four or five retailers where one would do the work. This means that there are four extra families to take care of, four extra rents to pay, four extra clerks to hire, four extra delivery wagons, and in fact, endless quadruplications all the way down the line. In the retail business it is fair to say that while there are very few individual retailers who are making more than a poor living, yet in the aggregate the costs of retail distribution are increased at least three hundred per cent. Were these smaller concerns grouped into larger units so that the overhead costs of all kinds might be adequately reduced, an untold saving would be made to both the consumer and the producer. Three ways have been suggested to bring this about, especially in the distribution of meats and other perishable products.

1. Distribution direct by the packers.
2. Distribution by growers through new agencies to be set up.
3. The institution of municipal markets dealing in perishables only.

The last named is probably the only one which will bear the test of application in practice. If each municipality of say five thousand souls or more, will undertake the establishment of municipal markets based on a reasonable percentage of profit and the rendering of efficient service, this action would automatically retire three out of every four retailers from the business. The temporary upheaval would be serious, but the ultimate benefits would more than compensate. In fact, many of the retailers who are now hardly making a living, would, as clerks, or helpers in the new organizations, fare better than at present and without the worry and responsibility of management.

CO-OPERATIVE MARKETING.

One of the great functions which can be performed through proper organization is co-operative marketing. As far as our industry is concerned, this would resolve itself into the marketing of our wool and our lambs.

The wool question is comparatively easy of solution. It is a non-perishable product, subject to warehousing and should have for a number of years, a reasonably stable basis of value so that loans can be readily secured on warehouse receipts. Some progress has already been made in co-operative marketing through pooling agreements in various states. These activities should be greatly enlarged and all of our wools should be marketed through such agencies. However, it cannot be done without proper organization.

The proper handling of our lamb product is a different and difficult question. The main obstacle to be overcome is the tendency on the part of growers and shippers to meet at the large central markets with such a large volume of shipments as to cause congestion or gluts, which in turn result in temporary oversupply, and sometimes lasting and unjust lowering of values. We must devise some means to overcome this evil. Combined action between ourselves and our commission men will perhaps bring fifty per cent of results. By bringing the packers, railroads and stock yards into our counsel, our troubles could be reduced perhaps seventy-five per cent. These things cannot be brought about, however, without proper organization and co-operation. After all, the commission men and stockyards people are simply acting as our agents, and it is up to us to tell them what we want done and to see that it is done, and to see that it is done in a proper way for our benefit and without prejudice to them.

Many plans have been formulated, and some have been tried with a view to avoiding this market congestion, but nothing permanent or satisfactory will ever be devised until we have set up machinery, through organization, by which we will know positively and definitely the number of lambs that are to go to market and when and where. The evil of the present system is that though there may be only about five thousand lambs in Kansas City and eight thousand in Omaha, with an active demand for twice as many on those respective markets at rising prices, yet if we ship twenty-five or thirty thousand to the Chicago market, with a demand for only fifteen or twenty thousand on that market, the price will go off twenty-five to forty cents per hundred in one day. This lower price will rule in the other markets notwithstanding the scarcity and strong demand on these latter markets. This item of congestion of supplies is one of the very costly

irregularities of our system of marketing and I bespeak your earnest consideration of the problem.

TRANSPORTATION AND FREIGHT RATES.

The eternal railroad question is still with us. Like ourselves, the railroads have had many difficulties to overcome and they are not yet out of the woods. Any criticism we may have to offer concerning the railroad situation is accompanied by our sympathy for their condition and surroundings. We are in thorough accord with President Harding's recommendations that the Labor Board should be made a part of the Interstate Commerce Commission and that proper legislation should be had to prevent a repetition of the disastrous strikes which we have witnessed in the past. * * * *

WOOL WOVEN FABRIC LAW.

For many years past we have had on the statute books, a Pure Food and Drugs Act. This law was passed with a view to preventing deception in the sale of certain classes of merchandise. Under the principle thus conceded, we have urged for several years the passage of an act formerly known as the Truth-in-Fabric bill. There has been no objection to the principle involved, but serious opposition has developed, both in and out of Congress. It is all founded on the claim that the law as written will not be operative and cannot be administered properly and will work undue hardship on the manufacturers and merchants handling wool and woolen goods. As wool growers we feel that some method can be devised which will protect not only the consumer, but the producer of wool in the final sale of goods purporting to be made from virgin wool. The prospects are now good for the passage of such a law, which has been reported to the Senate for action. We are in earnest hopes that the law may promptly pass the Senate and the House during this session of Congress. If it does not, it will have to be reintroduced as a new measure at the next session. We, therefore, urge all members of the organization to write their Congressmen and Senators asking that this legislation be promptly passed.

WOOL AND LAMB OUTLOOK.

During the past year there have been constantly advancing wool markets, both at home and abroad. The prospects for fair prices the coming season are excellent. The chief pitfall to be avoided during the months between now and shearing time will be the tendency to contract in advance by growers

who are hard up for ready funds to meet their expenses. Your secretary is keeping in close touch with market conditions, both locally and in the large markets, and will be glad to furnish information to those desiring it. He will also be glad to assist growers to a proper line of credit where it is needed for purposes of holding wool until sales can be effected. It must be remembered that the man who sells too cheaply in a measure makes a low market for the other fellow that must sell later. For this reason we are all interested in assisting every grower to secure the real value of his clip and no reasonable effort on the part of the association will be omitted to bring about this result.

Throughout the country there has been much misunderstanding of the tariff rate that was finally written into the Fordney-McCumber law. The rate written was thirty-one cents on the clean content. The average shrinkage of American wools has been estimated at fifty-nine per cent. This means an average tariff of 12.7 cents per grease pound of wool produced. However, certain trade discriminations and customs must be taken into account. This rate, while apparently 12.7 cents per pound really means about eleven cents effective tariff on the grease pound. Foreign wools seeking entry into this market from Australia, New Zealand and other parts, are as a rule skirted, and of much lighter shrinkage, grade for grade, and cost less for freight, insurance, selling commissions and other costs. There is less loss in scouring and spinning. When all things are taken into consideration, the domestic wools, which are sold in their entirety with bellies, locks, and skirts included, are discriminated against to the extent of from one to two cents per pound, according to the grade. So that after all, we have practically received a protective tariff equal to the old tariff which we had been supposed to get for many years past. Under the present law we are not only supposed to get it, but we are really getting it.

There is no great surplus of wool the world over. The consumption in the United States is greater by far than at any peace period in our history and bids fair to continue. Retailers are not overstocked and the consuming power of the nation is gradually increasing. There appears no cloud on the horizon which can affect good prices for the present year's clip. Therefore, our advice to all growers is to hold until their wool is shorn and they are ready to consign their pools to commission merchants.

The census when analyzed shows a shortage of about fifty per cent of sheep at the present in proportion to population, when compared with 1910. This is the strongest statistical position that the industry has ever occupied. Coupled with it is the knowledge that many of the ewe flocks in the land

today are aged and must soon go to the shambles. In order to re-stock, ewe lambs must be held over. This means that there will be no great surplus of lambs shipped to market for slaughtering purposes. Thus, with a fairly steady consuming demand, prices for the coming year should be on a level with prices for the year past.

In the long run, it would not be of benefit to the producer to have a runaway market for his wool or lambs. Such a thing would be a calamity, for it would inevitably result in reaction calling for lower prices. Let us not be deceived by temporary aspects. We must take the long view. We must remember that consumption of our product will be the gauge of our prosperity. Prices too high mean consumption too low. The time will come in a few years when our flocks will again be rebuilt and markets must be found for enlarged output. Pending this increase of production we must devote our energies to building up consumption. We cannot build up consumption by having prices prohibitive.

The government has done, or will soon finish doing, all it can do to help us. It has and will furnish us with the tools and with the facilities for profitable work, but it cannot make us efficient and economical. We must do that ourselves. In the days when the sun is shining, we are apt to forget that it will soon rain. Let us not be misled by false prosperity. In time of peace let us prepare for war. Credit is a fine thing, but inflation is bad, and credit can be too easy. And we are apt to forget in the days of credit that the day of payment is drawing near. Interest works while we sleep. Let us, in recognition of the splendid things which have been and are being done for us, show proper gratitude by remembering the principle which President McKinley announced in his Buffalo speech, that we must not expect always to receive, but we must also be prepared to give.

Among the resolutions adopted were the following:

TARIFF.

If the wool growing industry is to survive in the United States, it is imperative that the tariff on wool shall not be lower than the present rate.

Some large clothing manufacturers, jobbers and retailers, would have the public believe that the present duty on wool is large enough to increase the price of a suit of clothes from five to ten dollars, whereas the actual increase does not exceed one dollar and fifty cents per suit.

FREIGHT RATES.

We are opposed to the present schedule of freight rates on wool, believing them to be too high, and recommend that a strong effort be made for substantial reduction.

STRIKES.

We urge the enactment of a law prohibiting strikes in the railroad and coal mining industries, and establishing a tribunal for the settlement of labor disputes in these industries, putting such teeth in said law as will clothe the established tribunal with all the power necessary to enforce its decision, both as against employer and employe, making the party at fault responsible both criminally and civilly.

■ We further urge that such a law be passed speedily, and in any event in time to prevent a recurrence of the inestimable losses sustained by agriculture as a result of the strikes in 1922.

FABRIC BILL.

We reaffirm our approval of the French-Capper Truth in Fabric Bill (now known as the Wool Woven Fabric Law), and urge its enactment into law at this session of Congress. We urge that the states enact similar legislation.

We consider it the duty of the Federal Trades Commission to proceed against merchants who sell under the term "all wool" goods which contain shoddy and not all virgin wool. We believe further that this practice is a deception on the purchasing public and the Federal Trades Commission can and should take the necessary steps to terminate this unfair practice.

NATIONAL LIVE STOCK MEAT BOARD.

We endorse the organization known as the Live Stock and Meat Board, and pledge our support to its undertakings in disseminating accurate information regarding the true value of meat in the diet.

We approve the collection from shippers, for this purpose, of five cents for each carload of live stock.

We request the commission houses of Chicago, and other markets where this collection is not now being made, to make such collection and transmit the amounts to the National Live Stock and Meat Board.

ENDORSEMENT OF THE HARDING ADMINISTRATION.

We heartily endorse President Harding's administration, and we are proud of him for the fact that he has the courage

of his convictions. We commend his constructive policies pertaining to agriculture.

SHEARING.

We recommend that growers make individual contracts with each shearer, binding him substantially as follows: That the grower shall keep in his possession twenty per cent of all wages due until the shearing job is finished, in order to make the contract with the individual shearer effective, and said contract to also contain a provision that the grower may have the right to discharge any shearer who does not do satisfactory work, without affecting the contracts with the other shearers.

UNITED STATES DEPARTMENT OF AGRICULTURE.

We recommend the United States Department of Agriculture for its manner of administering the Packers and Stock Yards Act; for its educational work in setting forth the desirability of wider use of meat and other products of the farm and the range, and for the valuable investigations being conducted at the U. S. Sheep Experiment Station at Dubois, Idaho, and for its efficient work in controlling animal diseases.

BIOLOGICAL WORK.

We endorse and approve the work of the Biological Survey in co-operation with the states in the destruction of predatory animals, and request Congress to appropriate additional funds for the Department in order that its work may be extended so as to cover a wider territory, thereby increasing its usefulness, making possible a wiser and more efficient use of the funds appropriated, and hastening the eventual practical extinction of predatory animals to the great benefit of the wool growing industry and the nation.

VACANCY ON TARIFF COMMISSION BOARD.

There being a vacancy on the Tariff Commission, we urge the President of the United States to appoint Louis G. Connor of Washington, D. C., to fill the place, deeming him to be well-fitted for that position.

SECRETARY OF INTERIOR.

As there is soon to be a change in the office of Secretary of Interior, we urge upon the President that in filling the place he appoint a man from the western part of the country and one thoroughly acquainted with the duties of that office and the needs of this western country.

TAXES ON MIGRATORY SHEEP.

Many wool growers run their sheep a part of the year in one state, and a part of the year in another state. Equitable and adequate provision has not been made for the payment of taxes upon such sheep in said states.

We recommend that such property be taxed for the proportionate time it is in a given state, and that the several states having such migratory sheep make suitable laws to the end that the sheep owner may not be doubly taxed.

We express our disapproval of legislation exacting special grazing taxes and unreasonable inspection charges, and stand for reasonable state inspection fees only when no Federal inspection is available, and that Federal inspection be considered sufficient and final.

SYSTEMATIZED BUYING.

The Department of Commerce is urged to inaugurate, at an early date, such investigations, demonstrations and educational work as will result in more intelligent buying and the establishment of such co-operative plans of buying as will effect the needed economy in the distribution of food products.

THE COMMITTEE ON WOOL MARKETING MADE THE
FOLLOWING RECOMMENDATIONS:

1. We recommend that the contracting of wool prior to shearing be discontinued.

2. We recommend the establishment of regional wool pools, the larger the better, or marketing associations to be established at concentration points based on freight differentials and accessible territory.

3. We further recommend that these organizations employ efficient wool salesmen, or make use of established growers' selling agencies, and that they federate for mutual benefit, through the National Association.

4. We believe growers' organizations should store the wool in United States licensed wool warehouses and when advisable, have it graded by United States licensed certified wool graders, in accordance with commercial grading standards.

5. We also recommend that wools be combined in large saleable lines, attractive to mill buyers and sold to mills and reputable wool merchants in an orderly fashion. We feel that the wool so handled should be placed upon the market gradually and in accordance with market requirements throughout the entire season in order to avoid the depression of prices which ordinarily occurs when the entire wool clip of

the United States passes into the hands of the dealers in the space of a few weeks.

6. We believe that this plan will result in more business-like wool marketing and will eliminate several expensive commissions and burdensome charges which are now borne by the wool growers.

7. We believe that these associations should keep in the closest touch with the wool trade and the wool world and should have available at all times the very latest information concerning quotations, wool stocks on hand, fabrics, style trends, etc.

8. We recommend that the general plan of financing wool growers be made on advances based on United States licensed warehouse receipts.

9. We further recommend that the various growers' selling agencies report to each other through the office of the National Wool Growers Association, full and complete information as to stocks on hand, sales and prices.

We feel that it is only under some such plan as this that wool growers will be able to market their wools in an efficient manner.

Obituary.

GEORGE ALBERT DRAPER.

MR. GEORGE ALBERT DRAPER, of Hopedale, Massachusetts, the last surviving son of the late George and Hannah B. Thwing Draper, died in his sixty-eighth year, on February 7, 1923, at Phillips House of the Massachusetts General Hospital, Boston.

He was born in Hopedale, November 4, 1855, and received his education at the local schools, the Allen School of Newton, and the Massachusetts Institute of Technology. Upon leaving the Institute in 1874, he entered the office of George Draper and Son, whose partners were his father, George Draper, and oldest brother, William F. Draper. In 1877 he became a member of the firm, whose name was changed at that time to George Draper and Sons.

Mr. Draper was treasurer of the Hopedale Machine Company and the Hopedale Machine Screw Company when they, together with George Draper & Sons and the Dutcher Temple Company were consolidated in December, 1896, at which time he was elected treasurer of the Draper Company, the name given to the corporation formed by the merger of the above named concerns.

He was the head of the financial and manufacturing departments of the Draper Company and the Draper Corporation from his election in 1896 up to the day of his death. In the development and introduction of the Northrup Loom he was an important factor and to his vision, business ability and persistence is due much of the progress made in the art of weaving during the past thirty years.

Mr. Draper was President of the Grafton and Upton Railroad Company; President of the Harmony Mills, Cohoes, N. Y.; Director of the First National Bank of Boston; Director of the Manville Company, Providence, R. I.; Director of the Calhoun Mills, Calhoun Falls, South Carolina, and of the Brogon Mills, Anderson, South Carolina.

In 1899 he was a member of the Executive Committee of the Home Market Club, of which his father was the founder, was its president in 1900 and 1901, and thereafter was a member of its Advisory Board.

On November 6, 1890, Mr. Draper married Miss Jessie Preston, daughter of General William and Margaret Preston of Lexington, Kentucky, who died on February 11, 1917. A son, Major Wickliffe Preston Draper, and a daughter, Mrs. Helen Draper Taft, survive him.

Mr. Draper made his home in Hopedale and was much interested in its development and its people. With his brother, former Governor Eben S. Draper, he gave to the Unitarian Parish, of which they were members,

the church dedicated in 1898, as a memorial to their father and mother, George and Hannah B. Thwing Draper.

About two years previous to his death, Mr. Draper, with the intention to provide accommodations for various Hopedale activities, arranged for the incorporation of the Hopedale Community House and gave money for a community building and its equipment, together with an endowment fund which will yield an annual income for its maintenance and support.

Editorial and Industrial Miscellany.

SCANT INFORMATION NOW GIVEN FOR WOOL MANUFACTURES BY THE MONTHLY SUMMARY.

AFTER a long delay, the *Monthly Summary*, the governmental statistical publication prepared by the Department of Commerce for October containing newly arranged schedules for imports, was issued during the second week in March.

We have been so long accustomed to find in the schedule covering wool and wool manufactures information of importance and value to domestic wool manufacturers, that it is disappointing to find some of the most important sub-divisions supplanted by new combinations which will prevent many of the comparisons heretofore made. This is doubly regrettable, because it deprives the industry of desirable information, and because the value of statistics depends almost altogether upon their comparability. When that is destroyed, statistics published in the past become practically worthless both to the investigator and to members of Congress seeking information when framing or passing upon schedules of proposed new tariff laws.

Under the old arrangement, it was possible to learn the foreign value, the weight in pounds and the number of square yards for cloths, as well as the countries from which they were imported, and it was also possible to get the same information concerning dress goods. Under the new arrangement, cloths and dress goods are combined in one item, the new tariff fixing rates of duty for cloths weighing not more than four ounces and also for those weighing more than four ounces. With only the weight as a guide, however, it is impossible to tell how much of the imports are cloths and how much dress goods, because many dress goods weigh more than four ounces, monthly imports for 1921 and 1922 weighing with rare exception more than the minimum weight of four ounces. No clew is given as to the countries from which the imports come.

Likewise, the information formerly given showing the yardage and poundage of worsted and woollen cloths has been abandoned and domestic manufacturers will be unable hereafter to tell from the figures given whether the competition from foreign rivals is in the worsted or woollen branch of the industry.

The only information given under the new arrangement is confined to pounds and values, and there is no total of wool manufactures anywhere to be found. It is impossible to give the total, because in this group have

been combined the manufactures of hair with the manufactures of wool and the exact total of neither manufactures of wool nor of hair manufactures can be found by the seeker of such information.

One of the anomalies of the new arrangement is that human hair and manufactures thereof, horse hair, tails and manes, and other animal hair, although they do not have a common origin, are not bought and sold in the same branch of business, are not employed in the same industries, and are not subject to the same provision of the tariff law, are grouped with wool and wool manufactures. There is also the incongruous combination of knit fabrics of wool with narrow fabrics with fast edges.

One of the most inexplicable totals carried in the schedule is that of "Wool and hair (total)" immediately preceding "Wool unmanufactured (total)" on page 53 of the *Summary*. In the former total are included not only unmanufactured wool and hair (as one would suppose from its wording), but also rags, and manufactures of hair and wool. It is so misleading that scarcely a person would imagine that the figures given are for manufactures as well as for raw materials. What justification can be made for the combination is a mystery, and we should like to know the argument which secured so unusual a grouping.

While much of the information most desired has been suppressed in the schedule of imports, it is given in the schedule covering domestic exports, where distinction is made between woolen cloths and dress goods, and in each case the yards, pounds and values are given.

In the re-exports of foreign merchandise the square yards, pounds and values are given, and there is a separate item for dress goods for which are also reported pounds, square yards and values. If these details about the domestic exports and foreign re-exports are given, it is difficult to understand why the same information should not be given about our imports, concerning the ebb and flow of which the domestic manufacturer wishes to be informed.

Under the Payne-Aldrich law and under the Underwood law, the information now lacking was presented, so that the tariff law would not seem to cause the disappearance of the desired information, but rather the Classification Schedule prepared by an inter-departmental committee, whose report was approved by Secretary Mellon of the Treasury and Secretary Hoover of the Department of Commerce, and became effective September 22, 1922.

The compilation of import statistics is costly and troublesome, and the result should, it seems to us, justify the expense of having them assembled and printed. If when printed, they give little or no information of value to anyone and are incomparable with those issued for many years, the money spent in collecting and printing them is wasted. When the unfortunate grouping has been explained to the men in charge of the work, it is to be hoped that directions will be given for a rearrangement which, by removing hair and manufactures of hair from a group with which they are not properly allied, and providing for details heretofore given, will restore the figures' comparability with those published in former years.

COST OF CLOTHING AND THE FRENCH-CAPPER BILL, IF ENACTED.

In an article published in the *National Stockman and Farmer* for March 31, 1923, its author, Mr. W. L. Leffler, a wool grower of Seneca County, Ohio, asked, "Why should clothing cost more if the Truth in Fabric bill were enacted into law?", and declared that "this is a question I have failed to see satisfactorily answered by the opposition to this bill."

Does Mr. Leffler not know that this bill is being advocated by associations of wool growers because they believe that the price of wool will be increased if the bill should become a law of the United States? In case he has not heard or seen such statements in print, we produce some testimony on this point offered by wool growers themselves, who have been champions of this kind of legislation since the agitation was first started by the National Live Stock Association, and also declarations made by editors of magazines, devoted to wool growing and sheep raising, when advocating the enactment of the French-Capper bill.

Dr. W. J. Spillman, associate editor of *The Farm Journal* of Philadelphia, a witness before the Senate Sub-committee, admitted that his presence at the hearing was because, "I want to see the price of wool increased to the farmer."

C. R. Rowland, a county farm agent in Ohio, was quoted in the *Daily News Record* of June 2, 1922 as saying, "When the Truth in Fabric bill passes in Congress, wool is going to take a big jump in price, perhaps to 60 cents."

In an editorial in the *Sheep and Goat Raisers Magazine* for August, 1922, it was said that, "In our judgment there is not today a matter of more importance for the sheep and goat raisers than the question of truth in fabric. We have the word of our able and distinguished Congressman, C. B. Hudspeth, a large wool grower, for it that . . . its adoption into law will certainly advance the price of wool and mohair at least five cents per pound."

The foregoing statements are merely typical of many that have been made by advocates of the bill. It is no reflection upon those who urge its passage to say that its principal purpose is to increase the price of wool, because that is the avowed purpose and is, it seems to us, a convincing answer to Mr. Leffler's question.

Increase in the cost of wool inevitably means increased cost of cloth, and consequently of clothing. The higher prices for wool which this proposed legislation is intended to bring, is but a part of the higher cost of clothing which would be caused by the enactment of the Capper bill. At the present moment no one can state definitely what the cost of marking would be under the proposed law because the nature of the branding or labeling has not been laid down, the formulation of rules for such labeling being left by the Capper bill to the Secretary of Agriculture, the Secretary of the Treasury, and the Secretary of Commerce. In the least expensive manner, however, it would be an additional cost of manufacture sufficient to call

for a higher price for the fabrics. A similar and considerably larger expense would be incurred in the marking of garments, because of the necessity of preserving the identity of fabric labels in the descriptions applied to the garments. To get an idea of this expense in this last stage of the work, it is only necessary to read the testimony of representatives of the garment manufacturing industries at the Hearings held by the Subcommittee of the Senate Committee on Interstate Commerce.

Mr. Leffler said also that "this demand [for the law] must not come from wool growers only, but from thousands of others who desire good, substantial, and durable fabrics."

Perhaps Mr. Leffler does not realize that this agitation was started by wool growers and has been kept alive by wool growers, politicians anxious to make capital for re-election, and by a manufacturing company which has found the cry of "virgin wool" fabrics "a good selling idea."

In the hearings before Congressional Committees, comparatively few witnesses have appeared for the bill except wool growers, those who represented wool growers and affiliated farm organizations, who not infrequently admitted their lack of knowledge of the technical questions involved in the issue, builders of machines for which the passage of the law was expected to make a more active market, and a few dyers and laundrymen who admitted that it was the presence of cotton, and not re-worked wool, in garments which made their business more difficult.

It is only necessary to read the journals representing wool growers to discover whence come the resolutions asking for the passage by Congress and by State Legislatures of so-called "Truth in Fabric" bills.

Here are a few of the recent activities of the wool growers in this direction:

The Oregon Wool Growers Association at its meeting of January 27-29 endorsed a state "Truth in Fabric" law.

At the New Mexico Wool Growers convention held at Albuquerque, February 1 and 2, President Praeger Miller advocated the passage of a state "Truth in Fabric" bill.

At the Washington Wool Growers convention, a resolution approved the French-Capper "Truth in Fabric" bill.

The Idaho Wool Growers Association passed a resolution recommending the "Truth in Fabric" bill.

According to Mr. W. P. Wing, the "California Wool Growers Association has endorsed the Truth in Fabric bill. We have sent letters to our Congressmen and Senators and a telegram to J. B. Wilson, and have introduced a resolution in the California Legislature asking them to pass a resolution to Congress to pass the Truth in Fabric bill."

Mr. V. G. Warner, Secretary-Treasurer of the Iowa Fleece Wool Growers Association, writing in the *Sheep Breeder* for April, 1923, concerning the "Iowa Truth in Fabric" bill said: "We (meaning the Association) have had the Truth in Fabric bill introduced in both House and Senate. Have had public hearings before the Senate and House Committee, and the bill is now recommended out for passage."

In an article printed in the *National Wool Grower* for April, 1923, Mr. Hugh Sproat, a prominent sheepman of Idaho, wrote: "It certainly was the wrong year for wool growers to get any favorable legislation from the Idaho Legislature. . . . We tried to have enacted a 'Truth in Fabric' bill, but this died burning."

In a letter dated New York, March 7, 1923, from J. B. Wilson, Secretary of the National Sheep and Wool Bureau of America, to James T. Elliott, Secretary of the Texas Sheep and Goat Raisers Association congratulating him upon the enactment by the Texas Legislature of a "Truth in Fabric" law, Secretary Wilson wrote: "You fellows (meaning not consumers but wool growers and goat raisers) have put up a wonderful fight and deserve the thanks not only of the wool growers of the United States, but of the consumers of Texas and the United States. I realize that you have worked indefatigably on this bill, and it is largely due to the splendid work you have done that it has been passed. I wish to add my personal thanks for the work you have done and the splendid co-operation you have given us", meaning, of course, the National Sheep and Wool Bureau of America.

An Austin, Texas paper of April 3 commenting on the veto by Governor Neff of the so-called "Truth in Fabric" bill passed by the Legislature said: "Representative Walter Jones of Del Rio (a sheep and goat center) introduced the measure. It had the backing of the sheep and goat raisers of Texas", but not a word about the backing of any body of consumers without financial interest in the enactment of the bill.

On November 30, 1922, at a conference held in Chicago of the American Farm Bureau Wool Committee, a publicity committee consisting of J. B. Wilson of Wyoming, vice-president and secretary of the National Sheep and Wool Bureau of America; J. C. Holmes of South Dakota; A. J. Hopkins of the University of Wisconsin, and Samuel R. Guard of the American Farm Bureau Federation were appointed to work out a campaign to advance compulsory textile branding legislation. Due largely, if not entirely, to their efforts, bills for such state laws were presented to no fewer than eleven legislatures in session during the winter months. They certainly were not due to a widespread demand for such legislation from groups of wool fabric or wool clothing consumers, except those expecting to profit from it, but were part and parcel of the propaganda carried on by those who started the agitation years ago, and gave it new life at a time when prices for wool were low and prices for clothing were high and dissatisfaction was general among wool growers and the consuming public.

If this proposed legislation is not designed and intended for the special benefit of the wool growers, but is meant to be of real value to consumers, why was the bill not made to apply equally to linen goods, boots, shoes, and leather goods generally, silk goods, rubber goods, and all of the many other articles of family use to which the provisions of the bill could be made just as applicable as to wool manufactures? The declaration that this legislation is to protect the consumer is a subterfuge so transparent as to deceive no one at all acquainted with the inception of this movement, its backers at that time and its proponents at this moment.

In the Farm Bureau *Weekly News Letter* of February 1, 1923, it is stated that "Truth in Fabric legislation will not pass during this session of Congress unless the farmers of America make known their wishes in no uncertain terms. It is suggested that local meetings would do well to pass resolutions modeled on the following:

RESOLVED: WE WANT TRUTH IN FABRIC.

WHEREAS, Much of the raw material used in the manufacture of woolen fabrics and apparel sold as all wool is shoddy and not virgin wool, and

WHEREAS, Such fabrics and apparel are often sold as all wool without making known their contents, and

WHEREAS, This term, 'all wool', is nondescript and is being used to defraud the public, and

WHEREAS, The term, 'all wool,' because it fails to distinguish between shoddy and virgin wool places the public at the mercy of unscrupulous fabric manufacturers; deprives the people of their honest right to choose between shoddy and virgin wool, and also of the opportunity of knowing whether they are purchasing shoddy or virgin wool at virgin wool prices, and

WHEREAS, The unrevealed presence of substitutes, especially shoddy, in fabrics and clothes places a premium on deceit and profiteering and violates economic laws, and

WHEREAS, Similar legislation has been enacted such as the Pure Food law, therefore be it

RESOLVED, That this body go on record as favoring the enactment of the French-Capper Truth in Fabric Bill or such similar legislation in the United States as will compel manufacturers to stamp the actual contents on each and every yard of their cloth, and give the consumer his just and lawful right of knowing what he is purchasing.

Send the original signed resolution to your Senator and Congressmen. If there is no opportunity to hold meetings and pass such resolutions, write a letter to your own Senator and Congressman urging passage of the French-Capper bill for the reasons set forth."

Is it necessary to produce more evidence to convince any unbiased reader that the demand for a compulsory textile branding law does come chiefly from wool growers, and that the propaganda carried on by them in its behalf is widespread and insistent?

THE COMBING WOOL CASES.

FEW things done in haste are done well. This applies especially to the drafting of laws for passage by Legislatures or by Congress. No tariff law has ever been enacted which has not given rise to many protests over the rates of duty applied to imports under it, and vigorous contests over the meaning of the words or phrases used in the various paragraphs of the law. The Emergency Tariff law was no exception to this general rule. It was drawn and passed in haste without due consideration of the meaning of the words and phrases used in the few paragraphs of the bill.

Scarcely was it enacted before customs attorneys discovered in paragraphs, Nos. 18 and 19, phrases relating to the importation of wool and wool manufactures, the meaning of which was open to question and a

construction perhaps not contemplated by those who passed upon them or voted for their enactment into law.

Out of importations of what are known as combing wools, assessed at the high rates of the Emergency Tariff law came protests against such levy, and a claim that the wools in question were not dutiable under the Emergency law but were entitled to free entry under paragraph 650 or 651 of the law of 1913. The cases arising from many protests known as the combing wool cases, were heard last winter before General Appraiser McClelland and were based upon the contention that under the wording of the Emergency Tariff law, "wool commonly known as clothing wool", combing wools were not covered or included, and were, therefore, entitled to free entry under the Underwood-Simmons law which had not been repealed by the Emergency Tariff law.

After the hearing of many witnesses and the taking of voluminous testimony, a decision by the Board of General Appraisers was rendered on February 20, 1923, General Appraisers Brown and Sullivan affirming the decisions of the collector in denying the wools free entry and assessing duties according to the rates of the Emergency law, while General Appraiser McClelland, who heard the witnesses called in the case, filed a strong dissenting opinion upholding the contention of the protestants.

We understand that an appeal to the Customs Court of Appeals has been entered and that it will be argued in the autumn. When the appellate court renders its decision, a review of the case will be published in this Bulletin.

This case shows again the vital importance of having bills dealing with technical matters and offered for passage by Congress, drafted with care by men skilled in the use of the English language and possessing accurate knowledge of the decisions governing the interpretation of statutes.

CONTRADICTORY STATEMENTS BY FRENCH-CAPPER BILL ADVOCATES.

RASH, contradictory, and unsupported allegations were frequently made before Congressional committees by witnesses testifying in favor of the French-Capper compulsory textile fabric branding bill. Two such witnesses were Harry Fisher, a merchant tailor of Buffalo, New York who, before the Senate Sub-committee of the Senate Committee on Interstate Commerce, attacked the quality of the fabrics from which soldiers' uniforms were made. He had the audacity to declare that, "when you look at our army that went across to the other side and see the clothes those boys had on their backs, it was a shame. They weighed a ton on their backs, but there was very little warmth to them. It was the cheapest stuff that could be produced at a price that was fabulous." (Senate Hearings p. 61.)

Dr. Harry E. Mechling, Chairman of the Legislative Committee of the International Association of Dyers and Cleaners, a most voluble witness for the bill and careless of his statements asserted that, "During the war,

Mr. Chairman, as the gentleman who represented the tailors' association stated, it was a shame, a burning shame, that our boys should have been clothed with the clothing they were given. . . . As I stated before and as this gentleman before me stated, it is a burning shame and a blot on the history of the American manufacturers of cloth that they should give to the Government the kind of cloth that went into the uniforms that our boys were clothed in and sent across the sea in." (Senate Hearings p. 71.)

Seemingly unmindful of the contradiction, his testimony was to that offered by Mr. Alexander Walker, Dr. Mechling asserted that "if we had had such a law (meaning the French-Capper) during the war, we would have saved millions of dollars in salaries paid inspectors." Mr. Walker declared that "during the war (both were referring to the same period of time) the United States Government sent inspectors to all the mills that manufactured cloth, and it was not so expensive as we are led to believe for an inspector to be in every mill."

Dr. Mechling also contradicted Mr. Fisher. The latter testified that the clothes worn by the army "weighed a ton on their backs but there was *very little warmth to them*. On the contrary, Dr. Mechling testified that the Quartermaster's Department had to go out and spend the moneys of the American public to compel those manufacturers to give such a cloth as the Quartermaster's Department wanted so that they could *keep the boys warm* across the seas, as well as those who were on this side." One witness said, "There was very little warmth to them," while the other testified that the manufacturers had to furnish such a cloth as the Department wanted so that they could "keep the boys warm." The point on which the two witnesses were agreed was in their denunciation of the quality of the cloth furnished for the uniforms, although Dr. Mechling admitted the manufacturers were compelled "to give such a cloth as the Quartermaster's Department wanted."

These attacks upon the country's wool manufacturers for the quality of the fabrics furnished to the Government, need not be seriously considered, coming from such sources as they do. They show, however, the lengths to which the advocates of the French-Capper bill were and are willing to go to attain their ends. If the uniforms worn by our soldiers in France and in this country lacked the quality which those witnesses asserted they did, would not their wearers and their friends at home have raised a nation-wide outcry against the outrage?

If the uniforms were not satisfactory, as the witnesses asserted, responsibility for them can not well be charged to the manufacturers, to whom the Government doled out the raw materials for them and laid down minute specifications for their fabrication, compelling manufacturers to produce "such a cloth as the Quartermaster's Department wanted."

But an unbiased writer, Dr. Arthur H. Cole of the Department of Economics of Harvard University, has lately declared that "in the World War, American soldiers were generally recognized to have been the best clothed soldiers of any nation", a statement which may be safely accepted, and one which demolishes the unfounded assertions of the two witnesses for the French-Capper bill.

RESOLUTIONS AGAINST THE FRENCH-CAPPER BILL.

MANY resolutions favoring the enactment of the French-Capper bill have been adopted by various bodies unacquainted with wool manufacturing problems, without much consideration of them and without hearing any arguments against the proposed law. As a rule, such resolutions have been similar in expression, modeled after a common form, and have come from a common source. On the contrary, the following resolutions protesting against the passage of the bill are distinctive and were adopted by two bodies of men acquainted with the quality of fabrics, understanding the motives which prompt support for the measure, and knowing the fallacy of the arguments advanced for its enactment into law.

On January 18, 1923, the convention of the National Wholesale Dry Goods Association, on motion of Mr. F. A. Patrick unanimously adopted the following resolution against the French-Capper bill and in favor of the passage of the Lodge-Rogers bill:

RESOLVED, that the National Wholesale Dry Goods Association go on record as favoring the passage of the Lodge-Rogers bill which aims to rid merchandising of misrepresentation concerning the character and value of merchandise;

Also, that we go on record as opposed to the so-called Truth in Fabric or pure woven fabric bills such as the French-Capper bill providing for the stamping and labeling of merchandise, because of the technical and impracticable features of that bill.

At the Annual Convention of the International Association of Clothing Designers held in Cincinnati, Ohio on January 19, 1923 on motion of Irving Frankel, past president of the Association, the following resolutions calling for the defeat of the French-Capper bill were unanimously adopted:

WHEREAS—The proposal embodied in the so-called "Truth in Fabric" bill seeks to impose further burdens upon cloth manufacturers, manufacturers of clothing, retail dealers and the consumer of wearing apparel; and

WHEREAS—In this bill, no account is taken of the producers of raw material and others who participate in the profits arising from the clothing trade, and the mark-up of cloth, clothing and retail distribution is based upon the prices and profits of the classes so exempted from the operation of the bill; and

WHEREAS—There is extreme difficulty in identifying and segregating, in fabrics, virgin wool and wool-filler, and that an army of government experts, costing well into the hundreds of million dollars would be required in an attempt to enforce the provisions of the bill, thus adding to the cost of clothing in the open market, with practically no resultant good to the public, be it therefore

RESOLVED—that we view with extreme displeasure any attempt to subject the wearing apparel market to such a shocking and grievous burden, and declare the measure to be rank class legislation subversive of, and contrary to the letter and spirit of the Constitution and dangerous as a precedent; that in actual practice the enforcement of the law predicated on the terms of such bill would be impracticable and impossible, and any attempt to do so will doubtless cost more yearly than the total money value of all wool consumed in the United States during a light period, and that the consuming public would be required in the end to foot the bill.

RESOLVED—That as accredited representatives of the International Association of Clothing Designers, an important body of skilled artisans operating in each and every state of the Union, and intimately and vitally interested in the industry and successful conduct of the clothing trade in America, we enter our unanimous protest against enactment of the so-called "Truth in Fabric" bill for the above and equally valid reasons, and call upon both branches of Congress to defeat it.

IS THERE NEED FOR A "TRUTH IN FABRIC" BILL?

WE draw attention to the peculiar resolution on the "Fabric Bill" which was passed by the National Wool Growers Convention at its meeting in Spokane the last of January. It reaffirmed their "approval of the French-Capper Truth in Fabric Bill" and urged "its enactment into law at this session of Congress."

At the same time, the resolution declared that, "we consider it the duty of the Federal Trade Commission to proceed against merchants who sell under the term, 'all wool', goods which contain shoddy and not all virgin wool. We believe that this practice is a deception on the purchasing public, and the Federal Trade Commission can and should take the necessary steps to terminate this unfair practice."

One of the stock arguments for the passage of a compulsory textile branding bill since the agitation for it was begun, has been that it deceived the purchaser to sell to him fabrics or clothing as "all wool" which contained shoddy. Now we find the largest body of wool growers in the country blandly stating that "we believe that this practice is a deception on the purchasing public and the Federal Trade Commission *can* and should take the necessary steps to terminate this unfair practice."

If that is the belief of the wool growers, and we must take them at their word as expressed by the resolutions prepared, or passed upon, by a competent committee, why do they not have the Federal Trade Commission take immediate steps to do the very thing desired by them? Why insist upon the passage of a federal statute minutely to regulate only one of the country's basic industries, if the means are at hand to get the same result from a body in existence and clothed, as the resolution affirms, with the power to do the very thing sought?

WOOL TRADING METHODS IN CHINA.

EACH wool producing country has its own peculiar customs governing the collection and disposition of that product. In Australia and Great Britain, the chosen method of sale is by public auction; in the United States, it is usually by private treaty or, more recently in some sections, by sealed bids for wool pooled by countries, districts, or states. China, that unique country of the East, has peculiar methods which are described by a Government representative in the following interesting way:

In order to present the different trade customs and the monetary handicaps under which the wool business is carried on, the methods employed in several of the most important wool collecting and distributing centres will be described and may prove interesting as showing how and through

whom the wool is purchased and what is the currency or exchange medium of each place.

Among the most important wool markets of Outer Mongolia is Sining, which is located in the center of the wool producing districts, on the direct line of traffic to Tibet on the west; to the wool producing sections of Kansu on the south, and the railhead at Tatungfu, and Kalgan, on the east. The railhead at Tatungfu is reached by camel caravan routes.

Sining is particularly noted for the excellent quality of wool produced in the surrounding districts, and is therefore the headquarters for many wool merchants. About the first or second week in October of each year, the wool merchants of this district meet for the purpose of fixing or establishing the price which they intend to demand for the season's wool crop. As soon as this price is fixed, contracts are made for wool for future delivery. As wool is sold for future delivery the price must be fixed for the next season's crop, for it will be at least six months before the wool will come to market, and it is often a year after the wool is bought before it is ready for delivery to the buyer.

In Sining, wool is bought either direct from the producers or wool merchants, or through commission agents. When the transaction is a direct one, it is bought off the backs of camels as it is brought to the market, or from the stock of the wool merchant. The wool is inspected at the time of purchase, delivery is taken and the price paid. This method of buying direct is regarded as the most expensive way of purchasing wool. In addition to the cost price of the wool, the seller adds a commission for himself, and usually includes an extra margin to protect himself on his future contracts, which may be in the nature of a speculation. It has the further disadvantage of being a spot sale, which is only made of necessity, and the buyer is compelled to pay a higher price for the wool.

When any quantity of wool is being purchased it is always bought for a future delivery date, which is from six months to a year in advance. An order of this size would be placed by the buyer with a commission merchant, who, in Sining, is called a tafantzu, and with the placing of the order, the commission merchant would require the buyer to make a deposit, or advance payment, on his sales or purchasing contract. The amount of the advance varies according to the size of the order and will run between twenty and sixty per cent of the contract price. For his services as buyer, the tafantzu charges a commission of two per cent. Often the commission merchant will make a flat or net price for wool when he knows where his wool is coming from, or he has it contracted for in advance and makes his profit in the difference between his personal contract price and his selling price.

The most important wool market town situated on a railway is Kalgan, which is on the Peking-Suiyuan Railway and has been for many years the collecting and shipping point for nearly all wool which is destined ultimately for export.

The principal rival of Kalgan for Mongolian wool is Kweihuacheng. Here the wool is all purchased through a commission agent or broker called the yachi. This man takes no chances in the matter of his own profit, for in all the sales he makes the wool is weighed on his own scales, which have been so well trained that he always manages to make them balance in his favor. In addition to the commission he makes in the matter of weight, he gets a commission of from one to two per cent on his sales. This commission he divides with the inn keeper at whose house the sale has been concluded.

In Kweihuacheng, wool is bought either on a forward contract or from stock in warehouse, if the inns and storing places can be so-called. When spot cargo is bought, payment is presumed to be made within ten days, unless the date of payment is set ahead by agreement to one of the settlement days, which come four times a year. Contracts for wool to be delivered within six months or a year, are made on the partial pre-payment

plan, the buyer making a deposit or part payment in advance to the seller for the wool he is buying. This deposit or advance payment usually ranges from thirty to sixty per cent of the contract price. If when the cargo is delivered to the buyer, it is not up to standard or in accordance with the stipulations of the contract, the contract may be cancelled by the buyer, and the seller is required to refund the deposit or advance payment, together with interest at the rate of ten per cent per annum for the buyer's money during the time it has been in the hands of the seller.

The two most important wool market centers in Chihli are found in Hsinshi and Shunteh. Wool in these two places is stored in inns operated exclusively for the benefit of the wool traders. Guests at these inns pay no charge for their accommodation. Their expenses are paid out of the commission which the inn secures from the business of the guest of the hotel. In the former place the inn receives a commission of two per cent while in the latter place it averages between two and three per cent. Payment for wool in these two places is made in cash or by draft. The custom of the two markets provides that on contracts for future delivery, the amount of advance money shall average between twenty and forty per cent. The buyers in this district are not so trustful as they are in Kwei-huacheng, for they demand a guarantor for the deposit money they put up, so that if the wool is not up to sample or as per agreement, they have some security for their money and more hope of its return.

PROSPECTS FOR INCREASED WOOL PRODUCTION IN PERU.

IN our Annual Wool Review for 1921, reference was made to the work which Colonel R. J. Stordy, former chief of the veterinary service of the British Army, was doing in Peru for the Government to improve the quality of the flocks of that country and to increase its wool production. The Peruvian Consul General at London has lately issued an account of the progress which has been made and the hopes aroused for the success of the enterprise. If the belief held by Colonel Stordy that Peru has sufficient grazing lands to maintain 50,000,000 sheep in addition to large numbers of cattle, alpacas, and llamas, should be proven correct and his experiments in improving the native sheep should be successful, the increased production would be hailed by the wool manufacturers of all countries as an important addition to the world's present stocks, which are now scarcely sufficient to meet the world's increasing yearly requirements. The Consul General's account of the present status of the enterprise is as follows:

In his striking message to Congress the President referred with satisfaction to the establishment of the model farm at Puno, in which department there are some 6,000,000 sheep. He pointed out that the quantity and quality of wool and flesh obtained today from the indigenous stock was negligible, and that "when the sheep that now exist in the south of the Republic are replaced by others of greater production, the augmentation to wealth which will be derived from this Governmental initiative will be incalculable."

The *raison d'être* of the labors of Colonel R. J. Stordy, Director of the Peruvian Government's model farm at Puno, is to be found in the fact that the quantity of fine wool grows less and less each year, while the demand for frozen meat increases. Sheep farmers are, therefore, encouraged to cross their fine-fleeced merinos with English breeds for the sole purpose of producing carcasses for the meat market. But though we can do without

mutton we cannot do without wool. The fleeces of the world, however, are showing signs today of falling seriously behind the economically desirable supply. Hence the justification of Colonel Stordy's efforts to produce an animal whose fleece shall give the best result that knowledge can achieve. His breeding investigations during the last two years in the Peruvian Andes, at an altitude of 12,800 feet above sea level, have been strikingly successful, and the facts adduced by him prove, not only that the desired animal can be evolved but that the economic result to Peru will be the placing of that country on a wool producing level with Australia, the Cape, and the Argentine.

Without going at length into the questions of climate and pasturage—points on which Colonel Stordy has fully satisfied himself—it may be stated briefly that he went to Peru in 1919, presented later to the Peruvian Government the report of his preliminary investigations, and was commissioned in 1920 to establish a model farm in the Sierra "to demonstrate in practical form what results could be obtained under modern methods of sheep farming." He had found that lambing, shearing, and wool exporting had been carried on in the most irregular and primitive manner. On the other hand, Professor E. F. Barker, head of the Textile Industries Department of Leeds University, to whom he had sent samples of Peruvian wool for examination, reported that "Peruvian wool possesses qualities which merit attention."

SOUTHDOWNS SUPERIOR.

In February, 1921, Colonel Stordy took out to his farm 152 stud sheep, including Southdown, Hampshire, Suffolk, and Shropshire rams, four Soay rams, and five rams of the famous Rambouillet breed of France. The result of the experiment has proved interesting and instructive. The Southdowns showed themselves superior to all the other breeds. The Hampshire, Rambouillet, and Soay rams did well, but while the Suffolk ewes were satisfactory the Suffolk rams were less so. The Shropshires took a very long time to acclimatize, and had to be sent for three months to the lower altitude of the Cuzco Valley to recover strength and fitness.

Concerning this experiment Colonel Stordy makes the significant statement that "the crossbred lambs already obtained take after their sires, have good conformation, and are well clothed with wool. The lambs born in January and February last have grown splendidly, and outweigh their mothers by several pounds. The flock increase, too, has risen from 45 per cent to 75 per cent." Sheep farmers will agree with Colonel Stordy that 2,000 crossbred lambs running on the farm today, with the anticipation of a further 1,200 lambs at the end of the year (1922), is a fair record for nineteen months' work. Moreover, labor is cheap, the Indian is intelligent, has rapidly become expert in the use of hand shears, shearing some 60 sheep per day, and as his pay is only 80 cents—about 1s. 6d.—a day, Colonel Stordy believes that mechanical shearing will not soon be adopted.

Professor Barker's opinion on the results of Colonel Stordy's various cross-breeds leaves no doubt as to the future position of Peru as a wool growing country. He states: "The finest average-fibred fleece comes from the Soay crossed by native sheep, and as the fibre possesses peculiar properties fitting it for special manufacturing processes, it is obviously worthy of a prominent place in the schemes for development. . . . A broad survey of the native and crossbred wools submitted up to the present amply justifies the position taken up by Colonel Stordy in regarding Peru as one of the most potential wool growing countries in the world. I feel certain that within a few years, if the present developments are extended, Peruvian wools will make for themselves a position in both the ordinary and special wool markets of the world."

RULES GOVERNING IMPORTATIONS OF CARPET WOOLS.

THE long awaited rules and regulations to govern the importation under bond of wool intended to be used for the manufacture of carpets, rugs and other floor coverings, were issued the latter part of March. Attention is called to the manner in which the difficulty of dealing with noils made in the combing of carpet wools has been solved. Noils not used in the manufacture of carpets will not be penalized the twenty cents provided for in paragraph 1101. The regulations are as follows:

In accordance with the provisions of Title I, Schedule 11, Paragraph 1101, of the Tariff Act of 1922, the following regulations are hereby promulgated governing the importation or withdrawal from bonded warehouse under bond without the payment of duty, or with refund of duty, of wool (including wool on the skin) of the class covered by the said paragraph for use in the manufacture of carpets, rugs or other floor coverings:

SEC. 1. Entry.—The consumption entry or warehouse withdrawal shall have endorsed thereon the following notation: "Above merchandise entered (or withdrawn) under bond for use in the manufacture of carpets, rugs or other floor coverings under the provisions of Title I, Schedule 11, Paragraph 1101, Tariff Act of 1922," which endorsement shall be signed by the party giving the bond.

The wool may be entered for warehouse and there remain under the ordinary warehouse bond until withdrawn for use in the manufacture of floor coverings or otherwise disposed of in accordance with law.

When wool of the above class has been withdrawn under bond from warehouse and delivered for use in the manufacture of floor coverings, it shall not be returned to the bonded warehouse and again become entitled to this privilege.

SEC. 2. Individual Entry Bond—Penalty—Form.—At the time of making entry for consumption or withdrawal from warehouse of the wool for use in the manufacture of floor coverings, there shall be filed a bond, with satisfactory surety, similar to customs form No. 7561, conditioned as follows:

"Now, therefore, the condition of this obligation is such that if the said principal shall deliver to the collector of customs at said port the evidence required by law and regulations within the time and in the form prescribed that the articles have been actually used in the manner and for the purposes entitling them to such remission or refund of duty; or that the said articles or the products thereof have been delivered to a bonded dealer or manufacturer who has accepted responsibility under his bond for producing such evidence; or in default thereof if the obligors shall pay the duties which may be assessed upon the said articles, together with any additional duties or exactions authorized by law, then this obligation shall be void; otherwise it shall remain in full force and effect."

The penalty of the bond shall be in a sum equal to double the duty provided by paragraph 1101 plus 20 cents per pound for each pound of wool covered by the bond.

This bond, or in lieu thereof a term bond, as provided in section 3 hereof, shall be given by each and every dealer or manufacturer (including the manufacturer of floor coverings) through whose hands the wool, bonded as above, passes, until it is manufactured into floor coverings.

SEC. 3. Term Bond.—In lieu of the individual bond provided by the preceding section, a term bond may be filed with sureties satisfactory to the collector of customs and in a penal sum satisfactory to the collector.

SEC. 4. Refund of Duty.—Imported wool of the class covered by paragraph 1101, upon which the duty has been paid while in bonded warehouse, may be withdrawn in accordance with the provisions of these

regulations, and upon the production of the proof hereinafter required, the duty paid may be refunded.

Imported wool upon which the duty has been paid under a consumption entry and which is unconditionally released from customs custody shall not be entitled to the privilege of being entered under bond under the provisions of paragraph 1101 and such duty shall not be refunded.

SEC. 5. Records of Manufacture.—Each lot of wool released under bond shall be marked or stored in such a manner as to identify it with the import entry so long as it remains in the original bales, or in the bales or packages in which it is withdrawn from a manipulating warehouse under the provisions of section 562 of the Tariff Act of 1922.

Pulling, Washing, Sorting, Scouring and Carbonizing.—In the preliminary processes of pulling, washing, sorting, scouring and carbonizing, the wool may be processed in separate lots, in which case the records shall show the quantity and identity of the imported wool used, and the quantity of clean wool obtained, and if sorted, the quantity of each sort. Two or more import lots or parts thereof may be combined into one or more manufacturing or sorting lots to be thereafter identified by lot numbers or symbols, and the records shall show the quantity of wool from each import lot used in making up the manufacturing or sorting lot. The entire product of a period of manufacture may be designated as a manufacturing lot.

Yarn Spinning.—The carpet yarn spinner may trace the wool while in his possession by means of individual manufacturing lots or by periods of manufacture. In either case his records shall show the quantity of wool received by him, identifying it by import lots, if received in the condition as imported, or by manufacturing lots if received from a prior manufacturer. His records shall also show the quantity of wool from each lot used in making up the manufacturing lot of yarn, or during the period of manufacture, as the case may be, the quantity of each kind or number of yarn obtained, the quantity of noils obtained and the disposition thereof, together with the quantity of each kind of waste.

When the wool has been manufactured into yarn suitable for use only in the manufacture of carpets, rugs or other floor coverings, and has been delivered to a bonded manufacturer of floor coverings, it shall be considered as used in the manufacture of floor coverings for the purpose of crediting the bond.

Carpet Manufacture.—If the carpet manufacturer spins his own yarns he will proceed as provided in the preceding paragraphs of this section. Yarns, whether spun by the carpet manufacturer or otherwise obtained, shall be identified by manufacturing lots. The records of the carpet manufacturer shall show the quantities of each lot of yarn withdrawn from stock, and the period of manufacture during which it is used. Each manufacturer of floor coverings shall keep permanent records of the quantity of each kind and size of floor coverings manufactured, the period of manufacture thereof, the quantities sold, the quantities of each kind of waste, and the names and addresses of the purchasers of the floor coverings.

In addition, to the above the records of each puller, cleaner, sorter, spinner, dyer or manufacturer shall show from whom the material manipulated by him was received and to whom the finished product was transferred.

Abstracts.—Upon the completion of each lot or each period of manufacture, as the case may be, the puller, cleaner, sorter, spinner, dyer or manufacturer involved shall file with the collector of customs where his bond is deposited an abstract from his records showing the receipt and disposition of the wool or products thereof in the manner indicated above. The carpet manufacturer may omit from his abstract the names and addresses of his customers.

Each such abstract shall bear the following affidavit, signed by a responsible officer or member of the firm: "I,, do hereby solemnly swear (affirm) that this document is a true and correct

copy of our records of manufacture of the articles covered thereby; that the articles were manufactured from the materials and in the manner referred to therein; that they have been disposed of as indicated therein; and that the originals of these records, together with our factory, will at all reasonable times be open for inspection by proper officers of the government."

Subscribed and sworn to before me this.....day of....., 192.....

Notary Public or Deputy Collector of Customs.

If deemed necessary collectors of customs will refer such abstracts to the special agents for verification.

If the wool or wool products are not manipulated or manufactured while in the possession of any bonded dealer or manufacturer, an abstract will not be required, but the transfer of the same to another bonded dealer or manufacturer shall be made on transfer certificates provided for in the following section.

SEC. 6. Transfer Certificates.—Wool, pulled wool and partly manufactured wool, including noils, may be transferred by one bonded dealer, puller or manufacturer to another bonded dealer or manufacturer, whereupon the transferrer may be relieved of liability under his bond on account of the wool transferred, upon the filing of a transfer certificate similar to the certificate of delivery used in drawback cases, containing an indorsement signed by the transferee agreeing to accept responsibility under his bond for the use of the material transferred in the manufacture of floor coverings.

SEC. 7. Charges Against Bonds and Cancellation Thereof.—Upon the withdrawal of raw wool it shall be charged against the bond of the party withdrawing the same, and upon the production of the proof provided for above that the wool has been finally accounted for in yarn, or upon the production of a transfer certificate as provided in the preceding section, proper credit on the bond shall be given. When a transfer certificate is filed the wool covered thereby shall be charged against the bond of the party to whom it is transferred. If the latter's bond is on file at a different port, the certificate shall be forwarded by the collector to the port where such bond is filed, after crediting the bond of the transferrer.

In crediting bonds with the quantity of imported wool used, all wastes, except noils, whether valuable or not, shall be considered as having been used in the manufacture of floor coverings and due allowance shall be made therefor. Credit for the noils shall not be made unless shown to have been used in the manufacture of floor coverings. If not so used, duty shall be assessed thereon on the following basis: The regular duty assessable on the wool in its condition as imported shall be distributed to the tops and noils according to their average relative values during the period of manufacture in which produced. The amount of duty distributed to the noils divided by the number of pounds of noils produced will give the rate of duty per pound to be applied to the noils not used in the manufacture of floor coverings. Inasmuch as noils are an unavoidable by-product in the manufacture of worsted yarn, any noils on which duty has been paid on the basis above outlined may be used for purposes other than the manufacture of floor coverings without the assessment of the additional duty of 20 cents per pound provided by paragraph 1101. Noils so obtained may also be exported under customs supervision and when so exported proper credit shall be given therefor on the manufacturer's bond.

SEC. 8. Assessment of Duty on Wool Not Used.—If proper proof is not furnished within three years from the date of entry or withdrawal from warehouse that all of the wool entered or withdrawn under bond was used during such period in the manufacture of floor coverings in accordance

with these regulations, the regular duty shall be assessed on the portion not used.

If any wool entered or withdrawn under the provisions of paragraph 1101 and these regulations is used in the manufacture of articles other than floor coverings, there shall be assessed and collected, in addition to the regular duties on such wool, 20 cents per pound; provided that no such additional duty shall be assessed on noils.

(Signed)

MCKENZIE MOSS,
Assistant Secretary.

WAGES INCREASED IN THE WOOL MANUFACTURE.

ON March 21, announcement was made at Lawrence to the employees of the American Woolen Company of a $12\frac{1}{2}$ per cent increase in wages, effective April 30. This was the answer given by President William M. Wood to the request for consideration of an increase presented by the company's employees in December.

In December, 1920, a reduction of $22\frac{1}{2}$ per cent was made from the high war level. The announced advance restores a portion of that cut and brings wages back to a point a little above those in effect as of December 1, 1919, or 149 points above the base of December 31, 1915. The precedent set by the American Woolen Company has been quite generally followed with few exceptions by wool manufacturers in all the great manufacturing states and also by cotton manufacturers, both North and South. Several hundred thousand operatives will be the beneficiaries of this widespread increase, which will make it all the more difficult to manufacture products which can be sold for lower prices or for such prices as have prevailed in the immediate past. The following table shows the wage advances made in the wool manufacture since January 1, 1916, and the one decrease put into effect on December 20, 1920, compared with the wage base of December 31, 1915.

| Date. | Per cent Increase Base. | Per cent Decrease. | Per cent of Increase on Base Wage of Dec. 31, 1915. | Wage. |
|------------------------|-------------------------------|-----------------------|--|--------|
| December 31, 1915..... | | | | 100.00 |
| January 1, 1916..... | 5.88 | | 5.88 | 105.88 |
| April 17, 1916..... | 10.13 | | 10.73 | 116.61 |
| December 4, 1916..... | 9.92 | | 11.56 | 128.17 |
| May 1, 1917..... | 9.23 | | 11.83 | 140.00 |
| October 8, 1917..... | 9.93 | | 13.90 | 153.90 |
| March 25, 1918..... | 10.40 | | 16.01 | 169.91 |
| June 17, 1918..... | 9.95 | | 16.91 | 186.82 |
| June 2, 1919..... | 18.25 | | 34.16 | 220.98 |
| December 1, 1919..... | 12.50 | | 27.62 | 248.60 |
| May 31, 1920..... | 15.00 | | 37.29 | 285.89 |
| December 20, 1920..... | | 22.50 | *64.33 | 221.56 |
| April 30, 1923..... | 12.50 | | 27.70 | 249.26 |

*Decrease.

PRESENT PRICES FOR TOPS COMPARED WITH THOSE OF JULY, 1914.

THE *Weekly Wool Chart* for April 5 printed the following table to show the prices for various wool tops on July, 1914, November 2, 1922, December 28, 1922, April 4, 1923, the average for the years 1909-1913, and the increase in April 4, 1923 prices over the prices in July, 1914. It will be observed that the percentage increase has been very considerable for all numbers from 50's crossbreds to 70's merino. The 46's carded and 40's prepared show small advances, while 32's prepared show an actual decrease of 2 per cent. The table is as follows:

| Tops. | Average 1909-13. | July 1914. | Nov. 2 1922. | Dec. 28 1922. | April 4 1923. | Increase in April 4 Prices over July 1914. |
|--------------------------|---------------------|------------------|------------------|------------------|------------------|---|
| | d. | d. | d. | d. | d. | % |
| 70's merino | 28 $\frac{1}{2}$ | 33 | 68 | 65 | 64 | 94 |
| 64's merino | 27 $\frac{1}{2}$ | 32 $\frac{1}{2}$ | 64 | 62 | 61 | 88 |
| 60's super | 26 $\frac{3}{4}$ | 31 $\frac{1}{2}$ | 56 | 56 | 58 | 84 |
| 60's ordinary | 26 $\frac{1}{4}$ | 31 | 54 | 52 | 52 | 68 |
| 58's crossbred | 23 $\frac{3}{4}$ | 26 $\frac{1}{2}$ | 44 | 46 | 45 | 70 |
| 56's crossbred | 22 | 23 $\frac{3}{4}$ | 35 | 36 | 36 | 52 |
| 50's crossbred | 19 | 20 $\frac{1}{2}$ | 25 | 26 $\frac{1}{2}$ | 27 | 32 |
| 46's carded | 15 $\frac{1}{2}$ | 17 $\frac{1}{4}$ | 16 $\frac{1}{4}$ | 18 | 18 $\frac{1}{4}$ | 6 |
| 40's prepared | 14 $\frac{1}{4}$ | 16 $\frac{1}{4}$ | 14 $\frac{1}{4}$ | 15 | 16 $\frac{1}{2}$ | 2 |
| 32's prepared | 13 $\frac{1}{4}$ | 15 $\frac{3}{4}$ | 13 $\frac{3}{4}$ | 15 | 15 $\frac{1}{2}$ | *2 |

*Decrease.

BRITISH WOOL COMBING CHARGES.

On February 27, a new combing tariff was put into effect in the British worsted industry. Below are given the details of the new rates and for comparison the pre-war charges, as well as those in force from September, 1920. The new schedule made does not seem to have satisfied the patrons of the combers, and further effort has been made to induce the Wool-combers' Federation to make more reductions "to enable the worsted industry successfully to face foreign competition." The details of the tariff, effective February 27, are as follows:

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| | Feb. 26, 1923. per lb. d. | July 18, 1921. per lb. d. | March 14, 1921. per lb. d. | Sept. 20, 1920. per lb. d. | July 1, 1914. per lb. d. |
|---|------------------------------------|------------------------------------|-------------------------------------|-------------------------------------|-----------------------------------|
| MERINOS. | | | | | |
| Tearing 5 to 1 and over..... | 5 ³ / ₄ | 6 ¹ / ₄ | 7 ¹ / ₄ | 8 ¹ / ₂ | 2 ¹ / ₄ |
| Tearing 4 and under 5 to 1..... | 6 ¹ / ₄ | 6 ¹ / ₄ | 7 ¹ / ₄ | 8 ¹ / ₂ | 2 ¹ / ₄ |
| Tearing 3 and under 4 to 1..... | 6 ¹ / ₄ | 7 ¹ / ₄ | 8 ¹ / ₂ | 9 | 2 ¹ / ₄ |
| Tearing 2 and under 3 to 1..... | 7 ¹ / ₄ | 8 ¹ / ₂ | 9 ¹ / ₂ | 9 ¹ / ₂ | 3 ¹ / ₄ |
| Tearing under 2 to 1..... | 8 ¹ / ₄ | 8 ¹ / ₄ | 9 ¹ / ₂ | 10 ¹ / ₂ | 3 ¹ / ₄ |
| Burring..... | 1 extra | 1 extra | 1 extra | 1 extra | extra |
| Gilling in..... | .. | .. | .. | .. | .. |
| Dry combing..... | .. | .. | .. | .. | .. |
| Cape wools..... | .. | .. | .. | .. | .. |
| 58's. | | | | | |
| Tearing 12 to 1 and over..... | 5 ¹ / ₂ | 5 ³ / ₄ | 6 ³ / ₄ | 7 ¹ / ₂ | † |
| Tearing 8 and under 12 to 1..... | 5 ¹ / ₂ | 6 | 7 | 7 ¹ / ₂ | † |
| Tearing under 8 to 1 same as Merinos. | .. | .. | .. | .. | .. |
| Burring..... | 1 extra | 1 extra | 1 extra | 1 extra | — |
| Gilling in..... | .. | .. | .. | .. | .. |
| Dry combing..... | .. | .. | .. | .. | .. |
| 56's. | | | | | |
| Tearing 7 to 1 and over..... | 4 ⁷ / ₈ | 5 ¹ / ₂ | 5 ⁷ / ₈ | 6 ¹ / ₂ | 1 ⁷ / ₈ |
| Tearing 5 and under 7 to 1..... | 5 ¹ / ₂ | 5 ¹ / ₂ | 6 ¹ / ₂ | 7 | — |
| Tearing under 5 to 1..... | 5 ¹ / ₂ | 6 ¹ / ₄ | 6 ¹ / ₂ | 7 ¹ / ₂ | — |
| Lime and chemically treated skin wools..... | 1 extra* | 1 extra* | 1 extra* | 1 extra* | — |
| Burring..... | extra | extra | extra | extra | extra |
| Gilling in..... | .. | .. | .. | .. | .. |
| Dry combing..... | .. | .. | .. | .. | .. |
| 48's and 50's. | | | | | |
| Tearing 7 to 1 and over..... | 4 ³ / ₈ | 4 ³ / ₈ | 5 ¹ / ₂ | 5 ³ / ₈ | 1 ³ / ₈ |
| Tearing 5 and under 7 to 1..... | 4 ³ / ₈ | 5 ¹ / ₂ | 5 ³ / ₈ | 6 ¹ / ₈ | 1 ⁷ / ₈ |
| Tearing under 5 to 1..... | 5 | 5 ³ / ₈ | 6 ¹ / ₄ | 6 ³ / ₈ | 2 |
| Lime and chemically treated skin wools..... | 1 extra* | 1 extra* | 1 extra* | 1 extra* | — |
| Burring..... | extra | extra | extra | extra | extra |
| Gilling in..... | .. | .. | .. | .. | .. |
| Dry combing..... | .. | .. | .. | .. | .. |
| 30's to 46's. | | | | | |
| Tearing 8 to 1 and over..... | 4 | 4 ¹ / ₄ | 4 ³ / ₄ | 5 ¹ / ₄ | 1 ¹ / ₂ |
| Tearing 6 and under 8 to 1..... | 4 ¹ / ₄ | 4 ¹ / ₄ | 5 ¹ / ₄ | 5 ³ / ₄ | 1 ¹ / ₂ |
| Tearing under 6 to 1..... | 5 | 5 ¹ / ₄ | 5 ³ / ₄ | 6 ¹ / ₄ | 1 ³ / ₄ |
| Lime and chemically treated skin wools..... | 1 extra* | 1 extra* | 1 extra* | 1 extra* | — |
| Burring..... | extra | extra | extra | extra | extra |
| Gilling in..... | .. | .. | .. | .. | .. |
| Dry Combing..... | .. | .. | .. | .. | .. |
| CARDING, BACKWASHING AND GILLING ONLY..... | 3 ³ / ₈ | 3 ¹ / ₈ | 4 ¹ / ₄ | 4 ¹ / ₄ | 1 ³ / ₈ |
| Lime and chemically treated skin wools..... | 1 extra* | 1 extra* | 1 extra* | 1 extra* | — |
| PREPARING. | | | | | |
| 32's, 36's, 40's..... | 3 ¹ / ₂ | 3 ³ / ₄ | 4 ¹ / ₈ | 4 ¹ / ₂ | 1 ¹ / ₂ |
| 44's and 46's..... | 3 ³ / ₄ | 4 | 4 ³ / ₈ | 4 ³ / ₄ | 1 ¹ / ₂ |
| 48's and 50's..... | 4 | 4 ¹ / ₂ | 4 ⁵ / ₈ | 5 | 1 ¹ / ₂ |
| Lime and chemically treated skin wools..... | 1 extra* | 1 extra* | 1 extra* | 1 extra* | — |
| Burry and Seedy wools..... | 1 extra | 1 extra | 1 extra | 1 extra | extra |
| Gilling in..... | .. | .. | .. | .. | .. |
| Dry combing..... | .. | .. | .. | .. | .. |
| SCOTCH WOOLS..... | 4 ¹ / ₈ | 4 ¹ / ₈ | 4 ¹ / ₈ | 5 ¹ / ₈ | 1 ³ / ₈ |

*On raw wool weight.

†Included in Merinos.

HISTORY OF AMERICAN WOOL MANUFACTURE.

SUBSCRIBERS who are interested in the historical development of the American wool manufacture will be glad to know that Dr. Arthur H. Cole of Harvard University is preparing a history of the industry and has for a long time been collecting material for it. While all phases of the development will be interwoven, special attention will be given to changes in organization, mechanical equipment, and quality of output in order to apprehend the comparative advantage of the American industry at various periods. Dr. Cole has expressed certain views upon these phases in articles already printed in the *Quarterly Journal of Economics* (published by Harvard University) of November, 1921, November, 1922, and May, 1923. Dr. Cole desires the fullest and frankest criticism of these views, especially such criticism as may be backed with statistical or other concrete data. He is attempting to make the study thoroughly scientific and wishes to avoid all possible misstatements. Accordingly, if our subscribers or others with practical knowledge of the wool manufacture have read these earlier articles and have criticisms to offer, Dr. Cole will be glad to receive them. His address is 9 Holyoke House, Cambridge, Mass.

HOW MANUFACTURERS WISH TO HAVE FLEECES TIED.

THE Bureau of Animal Industry of the United States Department of Agriculture recently received inquiries from wool growers in regard to a correct method of tying fleeces. With the desire to give advice based upon the needs of wool manufacturers, members of this Association were asked by this Bureau to indicate their choice of methods for the most favorable handling of fleeces, particularly in the sorting room.

The great majority of replies indicates that paper twine is the most desirable. Medium weight hemp string and also cotton twine were named as possible substitutes. Jute twine is not liked and sisal twine is abhorred. A hard, smooth twine is desired which will not leave fibers in the fleece. Paper twine is cut easily, pulls out without difficulty, tears little and does not leave fibers in the fleece. If, by chance, any piece of this twine remains, it practically disappears in the scouring and working. Weavers are interested in the abandonment of sisal twine, because in the removal of its fibers from woven cloth great expense is involved each year. It is suggested that the farmers use cord made of wool or animal fiber the same as wool. Wool waste has also been suggested as a possibility.

As to the choice between the fleece neatly rolled with cut side out and tied with one string each of two ways around it, or the square box tied fleece with cut side out with either two or three strings each of two ways around the fleece, the manufacturers almost unanimously prefer the former method. A reply from one mill indicates that this method is preferred with medium or low medium wools, but that the latter method is better for fine wools. Among the replies concerning the box tied fleece, two strings are preferred to three strings. One manufacturer, commenting

upon this method, complained that the two or three strings each of two ways around the fleece make it expensive on account of the high cost of labor since it takes twice as long to untie such a package.

Another complained against the practice of using too much thick twine, the extra quantity used being wholly unnecessary to hold the fibers together. Furthermore, the twine is bought at the price of twine and sold at the price of wool. Still another manufacturer referred to the need of eliminating tags and sweepings, making what is commonly understood as "stuffed" fleeces.

B. A. W. R. A. STOCKS AND SALES.

THE British Australian Wool Realization Association has issued the following statistical statement showing stocks at December 31, 1922, disposed to February 28, 1923, and stocks at February 28, 1923.

| Description. | Stock and Afloat Dec. 31, 1922 Bales. | Disposals to Feb. 28, 1923 Bales. | Stock and Afloat at Feb. 28, 1923 Bales |
|--|--|--|--|
| AUSTRALIAN: | | | |
| Merino: | | | |
| Combing | 60,532 | 19,184 | 41,348 |
| Clothing | 5,972 | 1,779 | 4,193 |
| Carbonizing | 7,270 | 3,218 | 4,052 |
| Totals, merino | 73,774 | 24,181 | 49,593 |
| Crossbred: | | | |
| Combing, fine 50/58/60's | 176,569 | 27,721 | 148,848 |
| Medium 44/46's | 90,493 | 14,629 | 75,864 |
| Low, 40's and below | 35,213 | 5,034 | 30,179 |
| Clothing, fine 50/58/60's | 35,783 | 5,728 | 30,055 |
| Medium 44/46's | 22,996 | 2,371 | 20,625 |
| Low 40's and below | 11,419 | 1,369 | 10,050 |
| Carbonizing, fine 50/58/60's | 62,751 | 7,017 | 55,734 |
| Medium 44/46's | 34,570 | 3,992 | 30,578 |
| Low 40's and below | 11,658 | 1,453 | 10,205 |
| Totals, crossbred | 481,452 | 69,314 | 412,138 |
| Grand Totals, Australian | 555,226 | 93,495 | 461,731 |
| NEW ZEALAND: | | | |
| Merino | 2,465 | 1,058 | 1,407 |
| Crossbred (bulk combing): | | | |
| Fine 56/58's | 9,727 | 2,608 | 7,119 |
| Medium 46/48/50's | 85,250 | 14,831 | 70,419 |
| Low 44's and below | 120,971 | 19,972 | 100,999 |
| Slipes | 72,559 | 14,608 | 57,951 |
| Scoured | 67,047 | 14,389 | 52,658 |
| Grand Totals, New Zealand | 358,019 | 67,466 | 290,553 |
| Grand Totals | 913,245 | 160,961 | 752,284 |

Statistics for First Quarter.

ACTIVE AND IDLE MACHINERY AS OF FEBRUARY 1, MARCH 1 AND APRIL 1, 1923.

AS REPORTED BY THE BUREAU OF THE CENSUS, UNITED STATES DEPARTMENT OF COMMERCE.

THE reports issued by the Bureau of the Census of the active and idle machinery in the wool manufacture as of the first of February, March, and April, 1923, covering the months immediately preceding the date of the report, are herewith presented. Reports on active and idle machinery were begun by the National Association of Wool Manufacturers in December, 1913, and since that date they form a continuous record of the state of the industry. In November, 1918, the Bureau of Markets asked to take over the work, and later it was turned over to the Bureau of the Census, its first report being as of July 1, 1919.

The reports for the first quarter of 1923 show a marked improvement in the industry. The figures as of April 1 for percentage of active and idle machines to the total reported covering the month of March, indicate an increase of 5.4 per cent for broad looms, .4 per cent for narrow looms, .6 per cent for carpet looms, 4.9 per cent for cards, 7.6 per cent for combs, 5.5 per cent for woolen spindles and 4.2 per cent for worsted spindles.

The figures as of April 1 giving the percentage of active and idle hours to the total reported show a gain over those as of February 1 of 6.2 per cent for broad looms, 2 per cent for narrow looms, .8 per cent for carpet looms, 8.8 per cent for cards, 14.2 per cent for combs, 7 per cent for woolen spinning spindles and 6.7 per cent for worsted spindles.

In February, as is shown by the figures as of March 1, there was a lull all along the line, but it was much more than made up by the increased activity in the succeeding month, as is indicated by the figures as of April 1, an excess of overtime being again reported for cards, combs, and worsted spinning spindles.

February 1, 1923.*Summary of Reports of 985 Manufacturers, Operating 1,171 Mills.*

| | Looms | | | Sets of Cards | Combs | Spinning Spindles | |
|-------------------|-------------------------------------|----------------------------------|----------------------|---------------------|-------|-------------------|-----------|
| | Wider than 50 inch reed space | 50 inch reed space or less | Carpet and Rug | | | Woolen | Worsted |
| In operation..... | 51,368 | 14,790 | 7,928 | 6,038 | 2,210 | 1,945,643 | 2,284,508 |
| Idle..... | 12,029 | 2,461 | 1,289 | 996 | 428 | 348,834 | 269,188 |
| Total..... | 63,397 | 17,251 | 9,217 | 7,034 | 2,638 | 2,294,477 | 2,553,696 |

NOTE—All figures dated the first of the month cover the preceding month.

March 1, 1923.*Summary of Reports of 977 Manufacturers, Operating 1,161 Mills.*

| | Looms | | | Sets of Cards | Combs | Spinning Spindles | |
|------------------|-------------------------------------|----------------------------------|----------------------|---------------------|-------|-------------------|-----------|
| | Wider than 50 inch reed space | 50 inch reed space or less | Carpet and Rug | | | Woolen | Worsted |
| In operation.... | 51,312 | 14,796 | 7,939 | 6,196 | 2,239 | 2,006,320 | 2,259,416 |
| Idle..... | 10,179 | 2,471 | 1,396 | 813 | 324 | 298,507 | 216,136 |
| Total..... | 61,491 | 17,267 | 9,335 | 7,009 | 2,563 | 2,304,827 | 2,475, 52 |

April 1, 1923.*Summary of Reports of 969 Manufacturers, Operating 1,147 Mills.*

| | Looms | | | Sets of Cards | Combs | Spinning Spindles | |
|------------------|-------------------------------------|----------------------------------|----------------------|---------------------|-------|-------------------|-----------|
| | Wider than 50 inch reed space | 50 inch reed space or less | Carpet and Rug | | | Woolen | Worsted |
| In operation.... | 52,298 | 14,731 | 7,882 | 6,302 | 2,315 | 2,057,527 | 2,298,957 |
| Idle..... | 8,268 | 2,386 | 1,223 | 650 | 217 | 228,215 | 155,042 |
| Total..... | 60,566 | 17,117 | 9,105 | 6,952 | 2,532 | 2,285,742 | 2,453,999 |

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PERCENTAGES ARE BASED ON SINGLE SHIFT TIME.

Number of Machines in Operation Per Shift.

| | | | | | | | |
|------------------|--------|--------|-------|-------|-------|-----------|-----------|
| April 1, 1923: | | | | | | | |
| Single shift.... | 48,101 | 14,565 | 7,645 | 5,274 | 1,559 | 1,773,592 | 2,051,782 |
| Double shift.... | 4,197 | 166 | 237 | 1,028 | 756 | 283,995 | 247,175 |
| Mar. 1, 1923: | | | | | | | |
| Single shift.... | 47,362 | 14,630 | 7,703 | 5,291 | 1,549 | 1,767,698 | 2,028,915 |
| Double shift.... | 3,950 | 166 | 236 | 905 | 690 | 238,622 | 230,501 |
| Feb. 1, 1923: | | | | | | | |
| Single shift.... | 47,576 | 14,656 | 7,677 | 5,194 | 1,575 | 1,717,557 | 2,056,204 |
| Double shift.... | 3,792 | 134 | 251 | 844 | 635 | 228,086 | 228,304 |
| Jan. 1, 1923: | | | | | | | |
| Single shift.... | 48,136 | 14,402 | 7,624 | 5,226 | 1,532 | 1,720,356 | 2,042,694 |
| Double shift.... | 3,486 | 96 | 215 | 768 | 658 | 235,390 | 215,121 |

Per Cent of Active and Idle Machines to Total Reported.

| | | | | | | | |
|----------------|------|------|------|------|------|------|------|
| April 1, 1923: | | | | | | | |
| Active..... | 86.3 | 86.1 | 86.6 | 90.7 | 91.4 | 90.0 | 93.7 |
| Idle..... | 13.7 | 13.9 | 13.4 | 9.3 | 8.6 | 10.0 | 6.3 |
| March 1, 1923: | | | | | | | |
| Active..... | 83.4 | 85.7 | 85.0 | 88.4 | 87.4 | 87.0 | 91.3 |
| Idle..... | 16.6 | 14.3 | 15.0 | 11.6 | 12.6 | 13.0 | 8.7 |
| Feb. 1, 1923: | | | | | | | |
| Active..... | 80.9 | 85.7 | 86.0 | 85.8 | 83.8 | 84.5 | 89.5 |
| Idle..... | 19.1 | 14.3 | 14.0 | 14.2 | 16.2 | 15.5 | 10.5 |
| Jan. 1, 1923: | | | | | | | |
| Active..... | 81.1 | 82.7 | 84.9 | 85.2 | 83.1 | 84.5 | 89.2 |
| Idle..... | 18.9 | 17.3 | 15.1 | 14.8 | 16.9 | 15.5 | 10.8 |

Active and Idle Machine and Spindle Hours.

| | Looms | | | Sets of Cards. | Combs. | Spinning Spindles | |
|----------------|---|-----------------------------------|-----------------------|----------------------|---------|-------------------|-------------|
| | Wider than 50 inch reed space. | 50 inch reed space or less. | Carpet and rug. | | | Woolen. | Worsted. |
| April 1, 1923: | | | | | | | |
| Active..... | 12,635,841 | 3,251,061 | 1,770,161 | 1,655,917 | 672,515 | 516,995,043 | 564,389,657 |
| Idle..... | 959,658 | 541,517 | 262,342 | 3 | 4 | 7,587,718 | 5 |
| Mar. 1, 1923: | | | | | | | |
| Active..... | 9,711,297 | 2,568,005 | 1,540,787 | 1,387,527 | 472,818 | 445,675,961 | 467,490,099 |
| Idle..... | 2,469,988 | 886,723 | 341,273 | 72,832 | 33,932 | 25,204,849 | 20,720,783 |
| Feb. 1, 1923: | | | | | | | |
| Active..... | 11,865,287 | 3,233,402 | 1,795,526 | 1,491,727 | 588,472 | 463,898,355 | 528,877,935 |
| Idle..... | 1,814,868 | 627,533 | 284,036 | 76,965 | 2 | 42,409,524 | 25,576,771 |
| Jan. 1, 1923: | | | | | | | |
| Active..... | 10,923,787 | 2,682,877 | 1,646,660 | 1,396,753 | 556,182 | 437,675,474 | 495,271,607 |
| Idle..... | 2,001,771 | 978,549 | 329,855 | 83,254 | 1 | 45,746,943 | 7,215,583 |

Per Cent of Active and Idle Hours to Total Reported (Maximum Single Shift Capacity).

| | | | | | | | |
|----------------|------|------|------|-------|------------------|------|-------|
| April 1, 1923: | | | | | | | |
| Active..... | 92.9 | 85.7 | 87.1 | 103.9 | 117.2 | 98.6 | 102.1 |
| Idle..... | 7.1 | 14.3 | 12.9 | 3 | 4 | 1.4 | 5 |
| Mar. 1, 1923: | | | | | | | |
| Active..... | 79.7 | 74.3 | 81.9 | 95.0 | 93.3 | 94.6 | 95.8 |
| Idle..... | 20.3 | 25.7 | 18.1 | 5.0 | 6.7 | 5.4 | 4.2 |
| Feb. 1, 1923: | | | | | | | |
| Active..... | 86.7 | 83.7 | 86.3 | 95.1 | 103.0 | 91.6 | 95.4 |
| Idle..... | 13.3 | 16.3 | 13.7 | 4.9 | ... ² | 8.4 | 4.6 |
| Jan. 1, 1923: | | | | | | | |
| Active..... | 84.5 | 73.3 | 83.3 | 94.4 | 103.8 | 90.5 | 98.6 |
| Idle..... | 15.5 | 26.7 | 16.7 | 5.6 | ... ¹ | 9.5 | 1.4 |

¹ Overtime reported was sufficient to offset all idle hours and leave an excess of 20,427 hours, or 3.8 per cent.

² Overtime reported was sufficient to offset all idle hours and leave an excess of 16,994 hours, or 3.0 per cent.

³ Overtime reported was sufficient to offset all idle hours and leave an excess of 62,490 hours, or 3.9 per cent.

⁴ Overtime reported was sufficient to offset all idle hours and leave an excess of 98,726 hours, or 7.2 per cent.

⁵ Overtime reported was sufficient to offset all idle hours and leave an excess of 11,720,315 hours, or 2.1 per cent.

WOOL STOCKS AND CONSUMPTION.

BELOW we print our quarterly report (compiled from figures collected by the Bureau of the Census and the Bureau of Agricultural Economics), showing the quantity of wool reported to be in the hands of the domestic wool dealers and manufacturers as of March 31, 1923. They show that stocks of grease, scoured and pulled wools as of that date were 34,336,995 pounds and 11,670,676 pounds less than on September 30, 1922 and December 31, 1922, respectively.

The total stocks in the hands of manufacturers and dealers on March 31, 1923, reduced to grease equivalent were equal to 501,341,015 pounds. This total is smaller by 23,832,603 pounds than the corresponding stocks as of September 30, 1922, and 14,202,570 pounds smaller than those of December 31, 1922. It is impossible to make any comparison with stocks of a year ago on that date, because no statement was issued. Even as reported, the figures do not represent the actual poundage available for users because very large supplies were undoubtedly held by the companies from which no reports were received. Those were as follows: American Woolen Company, Boston, Mass.; Amos Abbott Company, Dexter, Maine; Amoskeag Mfg. Company, Manchester, N. H.; Carolina Cotton & Woolen Mills Company, Spray, N. C.; Crown Mills, Marcellus, N. Y.; Davisville Woolen Company; Davisville, R. I.; Faulkner & Colony Mfg. Company, Keene, N. H.; John and James Dobson, Inc., Philadelphia, Pa.; Merrimack Woolen Corp., Lowell, Mass., and Merrimac Hat Corp., Amesbury, Mass.

WOOL STOCKS MARCH 31, 1923 AS REPORTED BY DEALERS
AND MANUFACTURERS.

(All quantities in pounds).

| As reported by 421 Dealers and 630 Manufacturers. | Held by | | Total. | Estimated Equivalent Grease Wool. |
|--|----------------|----------------|----------------|--|
| | Dealers. | Manufacturers. | | |
| | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i> |
| Grease Wool: | | | | |
| Domestic..... | 17,139,540 | 32,652,655 | 49,792,195 | |
| Foreign..... | 109,018,577 | 142,769,272 | 251,787,849 | |
| Total..... | 126,158,117 | 175,421,927 | 301,580,044 | 301,580,044 |
| Scoured Wool: | | | | |
| Domestic..... | 5,954,527 | 11,200,054 | 17,154,581 | |
| Foreign..... | 18,779,274 | 10,586,514 | 29,365,788 | |
| Total..... | 24,733,801 | 21,786,568 | 46,520,369 | 93,040,738 |
| Pulled Wool: | | | | |
| Domestic..... | 8,044,532 | 6,632,297 | 14,676,829 | |
| Foreign..... | 5,458,185 | 5,297,988 | 10,756,173 | |
| Total..... | 13,502,717 | 11,930,285 | 25,433,002 | 33,910,669 |
| Total grease, scoured and pulled: | | | | 428,531,451 |
| Tops..... | 3,377,660 | 18,401,852 | 21,779,512 | 43,559,024 |
| Noils..... | 6,378,247 | 8,247,023 | 14,625,270 | 29,250,540 |
| Grease equivalent of all wool re- ported above..... | | | | 501,341,015 |

STOCKS OF WOOL, TOPS, AND NOILS HELD BY DEALERS ON
MARCH 31, 1923, BY CITIES.

(All quantities in pounds.)

| City. | Total. | Grease. | Scoured. | Pulled. | Tops. | Noils. |
|-------------------|-------------|-------------|------------|------------|-----------|-----------|
| Total..... | 174,150,542 | 126,158,117 | 24,733,801 | 13,502,717 | 3,377,660 | 6,378,247 |
| Boston | 119,682,792 | 90,130,442 | 17,492,875 | 5,989,093 | 2,769,172 | 3,301,210 |
| Philadelphia | 25,341,283 | 16,521,412 | 4,286,668 | 2,024,444 | 306,532 | 2,202,227 |
| New York | 10,519,001 | 8,807,007 | 785,680 | 926,314 | | |
| Chicago | 8,104,328 | 3,033,738 | 1,651,400 | 3,216,890 | | 202,300 |
| St. Louis | 3,045,322 | 2,986,078 | 59,244 | | | |
| San Francisco | 1,232,531 | 886,229 | 119,038 | 227,264 | | |
| Portland, Ore | 530,421 | 516,114 | 14,307 | | | |
| Other Cities..... | 5,694,864 | 3,277,097 | 324,589 | 1,118,712 | 301,956 | 672,510 |

STOCKS OF WOOL, TOPS, AND NOILS HELD BY MANUFACTURERS ON
MARCH 31, 1923, BY SECTIONS.

(All quantities in pounds.)

| Section. | Total. | Grease. | Scoured. | Pulled. | Tops. | Noils. |
|--------------------|-------------|-------------|------------|------------|------------|-----------|
| Total..... | 235,787,655 | 175,421,927 | 21,786,568 | 11,930,285 | 18,401,852 | 8,247,023 |
| New England | 104,000,157 | 75,799,777 | 11,299,451 | 5,037,524 | 7,933,221 | 3,930,184 |
| Middle Atlantic | 109,152,640 | 86,567,964 | 6,003,949 | 4,876,533 | 8,511,957 | 3,192,237 |
| Pacific Coast..... | 2,293,071 | 1,423,727 | 687,177 | 69,483 | 3,482 | 109,202 |
| All other. | 20,341,787 | 11,630,459 | 3,795,991 | 1,946,745 | 1,953,192 | 1,015,400 |

FOREIGN WOOL AFLOAT TO THE UNITED STATES ON
MARCH 31, 1923, BY GRADE.

(All quantities in pounds.)

| Grade. | Total. | Grease. | Scoured. | Pulled. |
|--------------------------|------------|------------|-----------|---------|
| Total..... | 48,744,333 | 46,776,005 | 1,471,967 | 496,361 |
| Fine..... | 15,733,190 | 15,276,181 | 271,119 | 185,890 |
| $\frac{1}{8}$ blood..... | 6,197,475 | 5,907,955 | 279,520 | 10,000 |
| $\frac{3}{8}$ blood..... | 7,039,290 | 6,712,151 | 290,139 | 37,000 |
| $\frac{1}{4}$ blood..... | 7,534,001 | 7,307,812 | 226,189 | |
| Low or Lincoln | 1,125,585 | 1,125,585 | | |
| Carpet | 9,522,792 | 8,854,321 | 405,000 | 263,471 |
| Grade not stated | 1,592,000 | 1,592,000 | | |

WOOL CONSUMED BY MONTHS.

In this Bulletin are printed the reports of the quantity of wool consumed in the months of January, February, and March, 1923, by manufacturers reporting. It will be observed that while the list of the firms and corporations not reporting is growing, the consumption reported for the three months of this year is 17,701,841 pounds, grease equivalent, greater than that of the corresponding months a year ago. Of course, to this reported consumption must be added the estimated consumption of those not reporting, which is generally placed at twenty per cent of those reporting. It will be seen, therefore, that if the rate of consumption continues for the remainder of the year at its approximate present rate, the consumption for the year will far surpass the unprecedented heavy amounts reported for 1922.

WOOL CONSUMED BY MONTHS.

JANUARY, 1923.

Schedules returned by 616 manufacturers.¹

| | | Grease Equivalent. |
|----------------|-------------------|--------------------|
| In grease..... | 45,032,279 pounds | 45,032,279 pounds |
| Scoured..... | 7,626,347 " | 15,252,694 " |
| Pulled..... | 2,297,534 " | 3,063,379 " |
| Total..... | 54,956,160 " | 63,348,352 " |

(1) These figures do not include returns from the American Woolen Company, Boston, Mass.; Amos Abbott Company, Dexter, Maine; Amoskeag Mfg. Company, Manchester, N. H.; Crown Mills Company, Marcellus, N. Y.; Faulkner and Colony Mfg. Company, Keene, N. H., or the Newton Shirt Company, Homer, N. Y.

FEBRUARY, 1923.

Schedules returned by 608 manufacturers.²

| | | Grease Equivalent. |
|----------------|-------------------|--------------------|
| In grease..... | 40,901,766 pounds | 40,901,766 pounds |
| Scoured..... | 7,090,335 " | 14,180,670 " |
| Pulled..... | 2,125,427 " | 2,833,903 " |
| Total..... | 50,117,528 " | 57,916,339 " |

MARCH, 1923.

Schedules returned by 610 manufacturers.³

| | | Grease Equivalent. |
|----------------|-------------------|--------------------|
| In grease..... | 43,062,739 pounds | 43,062,739 pounds |
| Scoured..... | 8,239,521 " | 16,479,042 " |
| Pulled..... | 2,488,027 " | 3,317,369 " |
| Total..... | 53,790,287 " | 62,859,150 " |

(2) Do not include data for the American Woolen Company, Boston, Mass.; Amos Abbott Company, Dexter, Maine; Amoskeag Mfg. Company, Manchester, N. H.; The Carolina Cotton and Woolen Mills Company, Spray, N. C.; Crown Mills, Marcellus, N. Y.; Davisville Woolen Company, Davisville, R. I.; Faulkner & Colony Mfg. Company, Keene, N. H.; Merrimack Woolen Corporation, Lowell, Mass.; or Newton Shirt Company, Homer, N. Y.

(3) These returns do not include data for the American Woolen Company, Boston, Mass.; Amos Abbott Company, Dexter, Maine; Amoskeag Mfg. Company, Manchester, N. H.; Carolina Cotton and Woolen Mills Company, Spray, N. C.; Crown Mills, Marcellus, N. Y.; Davisville Woolen Company, Davisville, R. I.; Faulkner & Colony Mfg. Company, Keene, N. H.; or Merrimack Woolen Corporation, Lowell, Mass.

MONTHLY CONSUMPTION—GREASE EQUIVALENTS.

| Month. | 1922 | | 1923 | |
|---------------|------------------------|--|------------------------|--|
| | Consumption for Month. | Totals for Year to End of Month Indicated. | Consumption for Month. | Totals for Year to End of Month Indicated. |
| January..... | 52,280,000 | 52,280,000 | 63,348,352 | 63,348,352 |
| February..... | 53,774,000 | 106,054,000 | 57,916,339 | 121,264,691 |
| March..... | 60,368,000 | 166,422,000 | 62,859,150 | 184,123,841 |

In computing the grease equivalent one pound of scoured wool is considered equivalent to two pounds in the grease, and one pound of pulled wool equivalent to one and one-third pounds in the grease.

CONSUMPTION OF WOOL BY GEOGRAPHIC SECTIONS.

*(All quantities in pounds.)***January, 1923.**

| Section. | Total. | Grease. | Scoured. | Pulled. | Grease Equiv- alent.† |
|----------------------|------------|------------|-----------|-----------|-----------------------------|
| Total..... | 54,956,160 | 45,032,279 | 7,626,347 | 2,297,534 | 63,348,352 |
| New England..... | 25,321,528 | 22,348,245 | 4,106,105 | 867,178 | 31,716,692 |
| Middle Atlantic..... | 23,245,013 | 20,329,376 | 1,826,710 | 1,088,927 | 25,434,699 |
| Pacific Coast..... | 523,344 | 133,749 | 365,544 | 24,051 | 896,905 |
| Other Sections..... | 5,866,275 | 2,220,909 | 1,327,988 | 317,378 | 5,300,056 |

February, 1923.

| Section. | Total. | Grease. | Scoured. | Pulled. | Grease Equiv- alent.† |
|----------------------|------------|------------|-----------|-----------|-----------------------------|
| Total..... | 50,117,528 | 40,901,766 | 7,090,335 | 2,125,427 | 57,916,339 |
| New England..... | 26,390,133 | 21,882,749 | 3,746,777 | 760,607 | 30,390,446 |
| Middle Atlantic..... | 19,809,428 | 16,979,362 | 1,729,791 | 1,100,275 | 21,905,977 |
| Pacific Coast..... | 492,380 | 111,543 | 358,476 | 22,361 | 858,310 |
| Other Sections..... | 3,425,587 | 1,928,112 | 1,255,291 | 242,184 | 4,761,606 |

March, 1923.

| Section. | Total. | Grease. | Scoured. | Pulled. | Grease Equiv- alent.† |
|----------------------|------------|------------|-----------|-----------|-----------------------------|
| Total..... | 53,790,287 | 43,062,739 | 8,239,521 | 2,488,027 | 62,859,150 |
| New England..... | 27,779,279 | 22,285,783 | 4,580,718 | 912,778 | 32,664,257 |
| Middle Atlantic..... | 21,588,482 | 18,381,972 | 1,990,750 | 1,215,760 | 23,984,485 |
| Pacific Coast..... | 545,782 | 254,382 | 243,825 | 47,575 | 805,465 |
| Other Sections..... | 3,876,744 | 2,140,602 | 1,424,228 | 311,914 | 5,404,943 |

†In computing grease equivalent, one pound of scoured is considered equivalent to two pounds in the grease; and one pound of pulled, to one and one-third pounds in the grease.

QUARTERLY REPORT OF THE BOSTON WOOL MARKET FOR
JANUARY, FEBRUARY AND MARCH, 1923.

DOMESTIC WOOLS. (F. NATHANIEL PERKINS.)

| | 1923. | | | 1922. |
|--|--------------|--------------|------------------|--------------|
| | January | February | March | March |
| OHIO, PENNSYLVANIA, AND WEST VIRGINIA. | | | | |
| (UNWASHED.) | <i>Cents</i> | <i>Cents</i> | <i>Cents</i> | <i>Cents</i> |
| Fine..... | 46 | 48 | 50 | 37 @ 39 |
| $\frac{1}{16}$ Blood..... | 54 | 55 | 56 | 40 @ 42 |
| $\frac{3}{8}$ "..... | 53 | 54 | 55 | 36 @ 38 |
| $\frac{1}{4}$ "..... | 50 | 52 | 53 $\frac{1}{2}$ | 35 @ 37 |
| Fine Delaine..... | 55 | 56 | 56 | 46 @ 48 |
| MICHIGAN, WISCONSIN, NEW YORK, ETC. | | | | |
| (UNWASHED.) | | | | |
| Fine..... | 48 | 48 | 48 | 35 @ 37 |
| $\frac{1}{16}$ Blood..... | 52 | 53 | 53 | 35 @ 37 |
| $\frac{3}{8}$ "..... | 51 | 54 | 54 | 34 @ 36 |
| $\frac{1}{4}$ "..... | 50 | 51 | 51 | 33 @ 35 |
| Fine Delaine..... | 54 | 55 | 55 | ..... |
| KENTUCKY AND INDIANA. | | | | |
| (UNWASHED.) | | | | |
| $\frac{3}{8}$ Blood..... | 54 | 56 | 56 | 40 @ 42 |
| $\frac{1}{4}$ "..... | 52 | 52 | 52 | 38 @ 40 |
| Braid..... | 37 | 40 | 41 | 26 @ 28 |
| MISSOURI, IOWA, AND ILLINOIS. | | | | |
| (UNWASHED.) | | | | |
| $\frac{3}{8}$ Blood..... | 49 | 53 | 54 | 33 @ 35 |
| $\frac{1}{4}$ "..... | 47 | 50 | 50 | 32 @ 35 |
| Braid..... | 36 | 40 | 41 | 22 @ 23 |
| TEXAS. | | | | |
| (SCOURD BASIS.) | | | | |
| 12 mos., fine and fine medium | 135 | 135 @ 140 | 140 | 90 @ 95 |
| Spring; fine, and fine medium..... | 120 | 125 | 125 | 75 @ 78 |
| Fall, fine, and fine medium. | 115 | 115 | 115 | 70 @ 75 |
| CALIFORNIA. | | | | |
| (SCOURD BASIS.) | | | | |
| 12 months, fine..... | 125 | 125 @ 130 | 130 | 90 @ 95 |
| Spring, fine..... | 110 | 110 | 115 | 75 @ 78 |
| Fall, fine..... | 95 @ 100 | 95 @ 100 | 100 @ 105 | 70 @ 72 |
| TERRITORY WOOL: MONT., WYO., UTAH, IDA., OREGON, ETC. | | | | |
| (SCOURD BASIS.) | | | | |
| Staple, fine, and fine medium..... | 140 | 140 | 140 | 98 @ 100 |
| Clothing, fine, and fine medium.... | 135 | 135 | 135 | 90 @ 95 |
| $\frac{1}{16}$ Blood..... | 120 @ 125 | 120 @ 125 | 125 @ 130 | 90 @ 95 |
| $\frac{3}{8}$ "..... | 105 @ 110 | 105 @ 110 | 105 @ 110 | 70 @ 73 |
| $\frac{1}{4}$ "..... | 85 @ 90 | 90 @ 95 | 95 | 60 @ 65 |
| NEW MEXICO. | | | | |
| (SCOURD BASIS.) | | | | |
| No. 1..... | 130 | 130 @ 135 | 130 @ 135 | 85 @ 90 |
| No. 2..... | 110 | 110 @ 115 | 115 | 70 @ 73 |
| No. 3..... | 75 @ 80 | 80 | 80 @ 85 | ..... |
| GEORGIA AND SOUTHERN. | | | | |
| (UNWASHED.)..... | 45 | 45 | 45 | 28 @ 30 |

DOMESTIC WOOLS.

THE new year opened with a strong tone to the wool market which was augmented by the strength in foreign markets. The demand from the mills was good and wools were generally moving in increased volume.

At the beginning of the year there seemed to be a minimum of contracting in the far West, as operators hesitated to meet the high demand made by wool growers. The opening of the goods market showed a healthy condition and the initial orders were large. As a result manufacturers were disposed to buy freely in both domestic and foreign markets.

As the season advanced, especially towards its close, contracting in the West had assumed a strength, but was limited as compared with the former years. For this season of the year, stocks of domestic wools of all classes are very light. Reports from the wool districts indicated an increased volume of the clip, and the winter has been favorable for the growth of the wool and it will undoubtedly be in good condition when sheared.

The advance of wages among most of the mills would seem to indicate that a stability in the manufacturing business can be depended on throughout 1923.

F. NATHANIEL PERKINS.

Boston, Mass.

April 7, 1923.

PULLED WOOLS. (W. A. BLANCHARD.)

| | 1923. | | | 1922. |
|------------------------|--------------|--------------|--------------|--------------|
| | January | February | March | March |
| | <i>Cents</i> | <i>Cents</i> | <i>Cents</i> | <i>Cents</i> |
| Extra, and Fine A..... | 125 @ 135 | 125 @ 135 | 125 @ 1 0 | 90 @ 110 |
| A Super..... | 110 @ 115 | 110 @ 115 | 110 @ 1 5 | 80 @ 85 |
| B Super..... | 90 @ 100 | 90 @ 100 | 90 @ 95 | 65 @ 75 |
| C Super..... | 70 @ 80 | 65 @ 75 | 6 @ 70 | 45 @ 50 |
| Fine Combing..... | 105 @ 115 | 110 @ 120 | 110 @ 120 | 75 @ 85 |
| Medium Combing..... | 90 @ 100 | 90 @ 105 | 95 @ 105 | 65 @ 70 |
| Low Combing..... | 75 @ 80 | 75 @ 85 | 75 @ 85 | 50 @ 55 |

PULLED WOOLS.

FOR wools suitable for worsted use the demand has been active throughout the quarter, and as the production has been largely of this character, pullers generally have had a satisfactory business. The finer grades of carding wools, A Supers and above, have also sold readily, particularly Fine A's and AA's. The lower grades, B Supers and C Supers, in both the grease and scoured state, have fallen off in demand and price. In this respect the heavy weight season in goods has been a disappointment to

pullers and dealers alike. A contributory cause to this decline in values has been the large offerings of scoured Australian skin wools and New Zealand slipes at prices materially lower than those asked for similar grades of domestic pullings.

W. A. BLANCHARD.

Boston, Mass.

April 2, 1923.

FOREIGN WOOLS — (BIGELOW, REED & Co., INC.)
Scoured Basis, 1923.

| | 1923. | | | 1922. |
|-------------------------------------|---------------|---------------|---------------|---------------|
| | January | February | March | March |
| Australian Combing: | <i>Cents.</i> | <i>Cents.</i> | <i>Cents.</i> | <i>Cents.</i> |
| Choice..... | 153 | 153 | 155 | 155 |
| Good..... | 143 | 143 | 145 | 140 |
| Average..... | 138 | 138 | 140 | 130 |
| Australian Clothing: | | | | |
| Choice..... | 153 | 153 | 155 | 155 |
| Good..... | 143 | 143 | 145 | 140 |
| Average..... | 138 | 138 | 140 | 125 |
| Sydney and Queensland: | | | | |
| Good Clothing..... | 143 | 143 | 145 | 140 |
| Good Combing..... | 143 | 143 | 145 | 140 |
| Australian Crossbred: | | | | |
| Choice..... | 63 @ 105 | 63 @ 105 | 65 @ 110 | 45 @ 80 |
| Average..... | 55 @ 95 | 55 @ 95 | 55 @ 95 | 40 @ 75 |
| Australian Lambs: | | | | |
| Choice..... | 150 | 150 | 150 | 175 |
| Good..... | 135 | 135 | 135 | 140 |
| Good Defective..... | 125 | 125 | 125 | 135 |
| Cape of Good Hope: | | | | |
| Choice..... | 150 | 150 | 150 | 155 |
| Average..... | 140 | 140 | 140 | 125 |
| Montevideo: | | | | |
| Choice..... | 140 | 140 | 145 | 130 |
| Average..... | 130 | 133 | 135 | 150 |
| Crossbred, Choice..... | 100 | 100 | 100 | 80 |
| English Wools: | | | | |
| Sussex Fleece..... | 104 | 104 | 102 | ..... |
| Shropshire Hogs..... | 95 | 95 | 95 | ..... |
| Yorkshire Hogs..... | 70 | 70 | 70 | ..... |
| Irish Selected Fleece..... | 64 | 64 | 64 | ..... |
| Carpet Wools: | | | | |
| Scotch Highland, White (in bond)... | 25 | 28 | 30 | 21 @ 22 |
| East India, 1st White Joria..... | 63 | 65 | 68 | 48 @ 50 |
| East India, White Kandahar..... | 53 | 55 | 60 | 40 @ 42 |
| Donkoi, Washed, White..... | ..... | ..... | ..... | ..... |
| Aleppo, White..... | 40 | 40 @ 43 | 43 | 32 @ 33 |
| China Ball, White..... | 75 | 75 @ 80 | 80 | 36 @ 38 |
| China No. 1 Sining (in bond)..... | 40 | 42 | 43 | ..... |

FOREIGN WOOLS.

DURING January and February merino, fine and medium crossbred wools were strong, with advancing prices in all foreign markets. During March, there was a break in prices, due primarily to the occupation of the Ruhr by the French. German orders for yarns in the English market were cancelled and the outlook was gloomy.

This depression was short-lived. The offerings at the London Sales were curtailed, and a sale of Colonial Wool at Liverpool was cancelled, but buying orders came forward freely at the lower quotations, and prices soon rebounded to the previous level.

Prices for foreign wools in the United States markets have been relatively lower than in foreign markets, due to purchases made earlier, at lower limits.

Importations of foreign wools have been heavy, principally from South America. Supplies of foreign merino and fine crossbred wools are limited, with the markets in the Southern Hemisphere practically cleared until the new clip comes forward.

The British Government-owned wools are materially reduced and consist chiefly of crossbreds.

Carpet wools are in small supply.

The importation and use of mohair, camels' hair, alpaca and cashmere continue in large volume.

BIGELOW, REED & CO., INC.

Boston, Mass.

April 6, 1923.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS
OF AUGUST 24, 1912.

Of Bulletin of the National Association of Wool Manufacturers, published quarterly, at Boston, Massachusetts, for April, 1923.

STATE OF MASSACHUSETTS } ss.
COUNTY OF SUFFOLK

Before me, a notary public, in and for the state and county aforesaid, personally appeared Walter Humphreys, who, having been duly sworn according to law, deposes and says that he is the editor of the Bulletin of the National Association of Wool Manufacturers, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher, National Association of Wool Manufacturers, 50 State Street, Boston, Mass.

Editor, WALTER HUMPHREYS, Secretary, National Association of Wool Manufacturers.

Managing Editor, none.

Business Managers, none.

2. That the owners are (Give names and addresses of individual owners, or, if a corporation, give its name and the names and addresses of stockholders owning or holding 1 per cent or more of the total amount of stock):

The National Association of Wool Manufacturers, a voluntary association without capital stock, three principal officers being: *President* John P. Wood, Philadelphia, Pa.; *Vice-Presidents*, William M. Wood, Boston, Mass.; George H. Hodgson, Cleveland, O.; Franklin W. Hobbs, Boston, Mass.; *Secretary and Treasurer*, Walter Humphreys, Boston, Mass.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are:

There are no stockholders or bondholders, mortgagees or other security holders.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the six months preceding the date shown above is.....
(This information is required from daily publications only.)

(Signed) WALTER HUMPHREYS.

Sworn to and subscribed before me this twenty-first day of March, 1923.

(SEAL)

WILLIAM R. BURKE.

(My commission expires January 16, 1925.)

BULLETIN
OF THE
National Association of Wool Manufacturers
A QUARTERLY MAGAZINE
DEVOTED TO THE INTERESTS OF THE NATIONAL WOOL INDUSTRY

VOL. LIII.]

BOSTON, JULY, 1923.

[No. 3.

THE TARIFF VIEWS OF A PROFESSOR OF
ECONOMICS.

IN the *North American Review* for February, there appeared an article by Professor J. Laurence Laughlin, Head of the Department of Economics in the University of Chicago, entitled "The Tariff of Exaggerations." It contained so many inaccurate statements, and showed such marked carelessness in reasoning, that wholly aside from the author's risk of his own repute, it hardly can be regarded as sustaining the traditions of the publication in which it appeared.

In reviewing the article with some particularity, we do not overlook the fact that the logical arguments which may be advanced against the system of protection are not to be brushed aside lightly. If all considerations pertaining to differences in this country and abroad, in living standards and existing wage levels and other elements of comparative costs are disregarded, a strong case can very easily be made against tariff protection; and it is principally by that method of ignoring the fundamental justifications for the American tariff policy, that its critics usually proceed. The question, however, is merely whether we shall, by a careful maintenance of our own living standard, slowly but surely raise that of the world at large to a parity with it; or whether we shall abandon the barriers that support that standard, and meet foreign competition in the American market in the only way that it then could be met—by reducing our living standard to an equality with the minimum that might be enforced in the

country which could wage the most persistent and sustained competition in our domestic market. There is the distinct line of divergence, and there intelligent opinions differ. Logical discussion may be brought to each side of the question, but fundamental facts cannot be changed. When opinions differ as to the importance or the unimportance of the factors upon which protectionist or free-trade conclusions must rest, there can be no legitimate quarrel with the conscientious conviction which has dictated an opposing viewpoint. When, however, an author employs subterfuge and misrepresentation for logic and fact, he is properly censurable, and his demagogic gestures will be rejected and resented by intelligent opinion upon both sides of the tariff question.

PROFESSOR LAUGHLIN FAILS TO SHOW RATES ARE TOO HIGH.

Professor Laughlin begins his article with the statement that many members of Congress "regard most provisions of a tariff bill from a political point of view," and he then adds that "one is forced to wonder why a great political party should have come to consider the support of high customs duties as good politics." If his objection is to the principle of protection, his argument should be directed against the duties, irrespective of the height of the rates. If he concedes a need for protection, but considers the rates higher than necessary for that purpose, he should offer some convincing evidence that certain rates in the bill exceed the requirements of actual protection. This he fails to do. What he offers instead are only generalized opinions, without the support of a single convincing fact. What does he mean by "high customs duties"? And what by "good politics"? The word, high, employed without any fact or statement to give it meaning or relative significance, becomes merely an invidious term which is, however, frequently resorted to by anti-protectionist speakers and writers who depend more upon impressions which they may be able to convey, than upon any actual facts or logical arguments. Thoughtful readers cannot but conclude that such opponents of protection are to be credited with more deftness than sincerity. General denunciation, without anything approaching a specific bill of complaint,

can only be interpreted as indicating that the author is without knowledge of any definite facts with which to support the position he has taken.

PROFESSOR LAUGHLIN CONTRADICTS HIMSELF.

In the statement quoted, Professor Laughlin frankly credits the Republican Party with having supported protection. What, then, is the meaning of his very next sentence: "For many decades the Republican Party has been cleverly made to seem synonymous with protectionism"? In one sentence he marvels that the Republican Party has remained steadfast in its "support of high customs duties," and in the next he tells his readers that "for many decades the Republican Party has been cleverly made to seem synonymous with protectionism"! At one moment Professor Laughlin would have his readers infer a foolhardy sort of loyalty to a principle, and at the next he would have them conceive it as some form of diabolic deception.

In this opening paragraph, however, are unconscious admissions which are of even greater significance. Among them is:

Those directly dependent on a duty for their very existence are protectionists by self-interest, and think the country owes them support whether or not the rest of the nation has to be bled that they may live.

Professor Laughlin's language makes it indisputable that he is here referring to industries which could not exist in this country without a protective duty. Of course, the language employed makes it entirely clear that again without making any definite statement upon his own account, or submitting any supporting evidence, he is inviting his readers to draw the most unfavorable inferences. Would it not have been much more in keeping with the general conception of professorial logic, if at this point he had stated that here again the discussion was not properly one of rates, but wholly as to the economic value or necessity of such industries, as weighed against the sum in which "the rest of the nation has to be bled that they may live"? Why did not Professor Laughlin name at least some of the industries to which he referred? Why did he, an economist, not go into some anal-

ysis of their economic value to the nation, stating the total number of employes, the approximate annual payroll, the wealth created and the taxes paid, and then tell his readers what, in his opinion, would be the economic results of destroying these industries by abrogating the duties upon which they "depend for their very existence"? Certainly it would be of great interest to have his estimate of the extent to which the competition for work,* by those who thus would be deprived of employment, would affect the wage scales (living standards) and the continuity of employment of those engaged in the remaining industries which do not need protection. If there are unnecessary industries that survive merely through protection, then that at least opens the way for a logical discussion as to their value in comparison with their economic cost to the nation, in enlargement of the competition for labor. That is the economic aspect of the question with which an economist might be expected to deal, but Professor Laughlin elected to hurdle that.

The conclusion of his opening paragraph that "in each congressional district [of manufacturing states] wealthy manufacturers have had little difficulty in getting protectionists nominated", compels the statement that it is arrantly demagogic.

In this country men and women are both nominated for, and elected to, Congress by voters, and not by manufacturers. We have never noticed any great deference to the desires or the opinions of employers. Professor Laughlin will have to admit that the situation is quite the reverse. Possibly he will concede that much of that attitude is due to just such preachments as we are reviewing here. Does he ask his readers to believe that even if wealthy manufacturers did have "little difficulty in getting protectionists nominated," the voters in all such communities would then, like so many docile sheep, vote for the employers' nominee, if that nominee did not represent the political views held by the majority? Such a supposition is mere nonsense. The truth is that protectionists are elected by industrial communities because a majority of the voters base their political judgments upon economic experiences of the past and believe themselves to be far better off under protection, with substantial living costs

but with steady employment at high wages, than under practical or actual free-trade, with lower living costs but with only part-time employment at a wage both actually and relatively much lower, or with no employment at all.

Professor Laughlin's second paragraph contains even greater inaccuracies than his first, although it does serve to give a clear indication that what he means by the expression "good politics" is in fact that form of political opportunism of which we have had so many examples in recent years: faithful support of a principle or pledge when such a course holds promise of being a vote-getter; abandonment of a principle, or violation of a pledge, when the latter course may seem to be the politically profitable one. In several places throughout his article, Professor Laughlin gives unmistakable evidence that one of the chief causes of his complaint is that the Republican Party always has adhered to its pledge in support of the protective principle. Therein he raises a question of political ethics which we think it is unnecessary further to pursue in this article. But in what he states to have been the results of recent protective tariff enactments, he is so far from the truth that their refutation requires merely the presentation of certain facts and statistics which could have been as easily ascertained by Professor Laughlin as by the present reviewer. For instance, he says:

Without going very far back, we well know that the McKinley Tariff Act of October 1, 1890, proved to be very poor politics for the Republican Party. It reduced revenues by what were practically prohibitory duties.

DID THE MCKINLEY LAW REDUCE REVENUES BY PROHIBITORY DUTIES?

Let us examine official statistics, and see whether the McKinley Tariff Act did diminish either imports or customs revenues. The McKinley Act was in effect from October 1, 1890, until superceded by the Wilson-Gorman Tariff of 1894. For the fiscal year 1889, directly preceding the enactment of the McKinley Bill, the total value of imports amounted to \$745,131,652. For the four years, 1890 to 1893, inclusive, that the McKinley Act was effective, the average annual value of imports was \$809,507,497. And in 1894, the year

during which the Wilson-Gorman Law went into effect, their value was \$654,994,622. So far as imports were concerned, therefore, they averaged, throughout the life of the McKinley Tariff Act, nearly \$65,000,000 more per year than they totalled for the year directly preceding the enactment of that law, and \$150,000,000 more per year than for the year in which the Wilson-Gorman Bill was enacted.

But Professor Laughlin's specific statement is that the McKinley Tariff Law "reduced revenues." Let us see how nearly this statement conforms with the facts. The customs receipts for the ten-year period immediately preceding the enactment of the McKinley Bill were by far the largest for any previous decade in the history of the country. They amounted to \$2,049,454,229, or an average of \$204,945,423 for each of the ten years. But for the four-year period (1890-1893) in which the McKinley Law was in force, they amounted to a total of \$829,998,771, or an average of \$207,499,692 for each of those years, while in 1894, the year the Wilson-Gorman Bill was passed, they dropped to \$131,818,531, the lowest total of customs revenue received by the government for any fiscal year since 1878!

Where, then, does Professor Laughlin find the authority for his statement that "the McKinley Tariff Act. . . reduced revenues by what were practically prohibitory duties"? As has already been stated, these facts are so easily accessible that they may be obtained by the turn of a hand. It is difficult to imagine a professor of economics being in ignorance of them—particularly one who undertakes to write upon the tariff subject with authority. Yet the Professor's ignorance of these facts must be assumed, else he would be in the position of having knowingly misrepresented the truth.

WAS THE DINGLEY BILL ENACTED WITHOUT MANDATE FROM THE COUNTRY?

He can hardly be regarded as having redeemed himself, though, by these sentences which occur only a few lines further on:

It is worth recalling that never again has the [Republican] party dared to go to the country on an open distinctive issue with the tariff. In 1896, McKinley was elected President

over Bryan on the silver issue. Under that cover, and without any mandate from the country, the protectionists enacted the Dingley Bill, July 24, 1897, (displacing the Wilson Act of 1894).

It is difficult, of course, to decide just what Professor Laughlin means by the expression, "an open distinctive issue," but if his intent is to convey the impression that since the time of Mr. Cleveland, the Republican Party has failed to make the protective tariff a primary, if not a paramount, issue, the facts again prove him wrong. In proof of this—especially in connection with his further statement that after the election of McKinley "without any mandate from the country the protectionists enacted the Dingley Bill"—it will be instructive to examine each of the Republican national platforms, beginning with that one to which Professor Laughlin refers as containing no mandate for the displacement of the Wilson-Gorman Law with a protective tariff.

Possibly Professor Laughlin is not familiar with the language of the first plank in the platform upon which Mr. McKinley was elected President. Here it is:

We renew and emphasize our allegiance to the policy of protection as the bulwark of American industrial independence and the foundation of American development and prosperity. This true American policy taxes foreign products and encourages home industry; it puts the burden of revenue on foreign goods; it secures the American market for the American producer; it upholds the American standard of wages for the American workingman; it puts the factory by the side of the farm, and makes the American farmer less dependent on foreign demand and price; it diffuses general thrift, and founds the strength of all on the strength of each. In its reasonable application it is just, fair and impartial; equally opposed to foreign control and domestic monopoly, to sectional discrimination and individual favoritism.

We denounce the present Democratic tariff as sectional, injurious to the public credit, and destructive to business enterprise. We demand such an equitable tariff on foreign imports which have come into competition with American products as will not only furnish adequate revenue for the necessary expenses of the Government, but will protect American labor from degradation to the wage level of other lands. We are not pledged to any particular schedules. The question of rates is a practical question to be governed by

the conditions of time and of production; the ruling and uncompromising principle is the protection and development of American labor and industry. The country demands a right settlement, and then it wants rest.

That is the language, not of some obscure part of the platform of 1896, but of its first and foremost plank. We fail to see how any intelligent person could read it, and then say: "In 1896, McKinley was elected. . . and without any mandate from the country, the protectionists enacted the Dingley Bill."

It is a further fact that anyone familiar with that campaign, either by personal experience or examination of the political literature of the period, must know very well how important an issue the tariff was, because of the business depression and unemployment which had been experienced during the time that the Wilson-Gorman Law was in effect. Opponents of a protective tariff endeavor to attribute the unfavorable industrial conditions, closed factories and shops and idle workmen, to other causes; but there can be no denial of the existence of the conditions, nor of the fact that because of those conditions the tariff was an issue in no way secondary to that of the currency standard, which to the rank and file of the voters was much more of an abstraction.

WHAT REPUBLICAN PLATFORMS SHOW.

While the Republican platform of 1896 is of itself a complete refutation of Professor Laughlin's statement that "never again [since the election of Mr. Cleveland, in 1892] has the party dared to go to the country on an open distinctive issue with the tariff," it may throw a further light upon the character of his assertion to quote the essential parts of the protective tariff planks in each of the Republican platforms since that of 1896.

In 1900 the Dingley Tariff Law was in full operation, and William McKinley was re-elected President upon a platform which had this to say concerning a protective tariff:

We renew our faith in the policy of protection to American labor. In that policy our industries have been established, diversified and maintained. By protecting the home market, competition has been stimulated and production cheapened. Opportunity to the inventive genius of our people has been

secured, and wages in every department of labor maintained at high rates—higher now than ever before, and always distinguishing our working people in their better conditions of life from those of any competing country. . . .

In 1904 the Republican platform included this pronouncement:

We have replaced a Democratic tariff law based on free trade principles and garnished with sectional protection, by a consistent protective tariff; and industry, freed from oppression and stimulated by the encouragement of wise laws, has expanded to a degree never before known, has conquered new markets, and has created a volume of exports which has surpassed imagination. . . . Protection which guards and develops our industries is a cardinal policy of the Republican party. The measure of protection should always at least equal the difference in the cost of production at home and abroad. We insist upon the maintenance of the principles of protection. . . .

Ever since the election of Mr. Taft, in 1908, the opponents of protection have been endeavoring to make it appear that in the platform of that year the Republican Party pledged itself to a downward revision of the Dingley Law. That this is clear misrepresentation, and that the Republican Party did not commit itself to any general downward revision, is indisputably established by the language of that part of the platform:

The Republican party declares unequivocally for a revision of the tariff by a special session of the Congress immediately following the inauguration of the next President. . . .

Again in its platform of 1912 it was said:

We reaffirm our belief in a protective tariff. . . . The protective tariff is so woven into the fabric of our industrial and agricultural life that to substitute for it a tariff for revenue only would destroy many industries and throw millions of our people out of employment. . . . We hold that the import duties should be high enough, while yielding a sufficient revenue, to protect adequately American industries and wages. Some of the existing import duties are too high and should be reduced. . . .

But it is in connection with this campaign that Professor Laughlin makes one of the most remarkable statements in his remarkable article; for he says that antagonism to the Payne-Aldrich Tariff Act of 1909 grew so strong that it turned

the House over to the Democrats in 1910, "and swept the Republicans from power with the election of President Wilson in 1912." Such a statement is an affront to the common sense of any intelligent reader. Is it possible that Professor Laughlin does not know that Woodrow Wilson was elected to his first term by a minority of the votes cast? Is it to be understood that he is so poorly informed upon political history of the United States of no more than a dozen years ago, that he does not know that Mr. Wilson owed his election directly to the division of the Republican vote, due to the "third party" movement launched by Colonel Theodore Roosevelt? Does he not know that the combined vote polled for Roosevelt and Taft—both protectionist Republicans—far exceeded that for Mr. Wilson, the low-tariff Democrat? By what process of reasoning is Professor Laughlin able to interpret the result of that three-cornered campaign as showing popular opposition to the Payne-Aldrich Law or the principle of protection?

That Professor Laughlin does, however, regard Republican protection and American prosperity as almost synonymous, would seem to be indicated by the closing sentence of his second paragraph. For, as everyone knows, from the outbreak of the European War, which simultaneously shut off European exportations to this country and created an abnormal demand by those countries for all sorts of products of the United States, and progressively until a year or more after the close of hostilities, when the revival of European industries began to set up a foreign competition in our markets which the duties of the Underwood-Simmons Law could not control, this country did enjoy a great era of prosperity. And of this period Professor Laughlin says:

Since 1914, and particularly since 1917, the World War made it impossible to judge the effects of the Act of 1913, and in fact under abnormal war conditions we lived as if we had had a heavy protective tariff.

PROFESSOR LAUGHLIN QUOTED ONLY A PORTION OF THE
DECLARATION.

However, as he comes to more recent events, and the national elections of 1920, Professor Laughlin does not indicate

any greater disposition to discuss facts frankly than is evidenced in the earlier parts of his article. He says that in that election the issue was not the tariff, and "In fact, the Republican platform excused the party from action on it." In support of that statement, he quotes the following as though it were the whole of the tariff plank in the Republican platform of 1920:

The uncertain and unsettled condition of international balances, the abnormal economic and trade situation of the world, and the impossibility of forecasting accurately even the near future, precludes the formulation of a definite programme to meet conditions a year hence, etc.

Before quoting the additional and very important part of the plank which Professor Laughlin found it convenient to ignore, it might be well to have a clear understanding of the part he quoted. So far as we are able to comprehend the English language, the above sentence from the 1920 platform stated merely this: That at that time (the convention period in June, 1920) it was impossible to lay down a definite programme on tariff "to meet conditions a year hence"—that is to say, at a year from that date, or, roughly in the summer of 1921. The "year hence" represented the interval between the convention and the earliest possible action that a new Congress would take upon the tariff. The language did not state or imply that the new Congress should not act, but merely that at the time of the convention it was not possible to formulate in definite terms the nature of the tariff changes that would be necessary when the new Congress should be able to take up the subject a year later. Nothing is said about any difficulty as to tariff policy; indeed, the general policy is made entirely clear in that part of the plank which Professor Laughlin had to overlook, in order to make the statements he did.

Nevertheless, in tone and language which might indicate that the Republican Party had violated some pledge, Professor Laughlin sets forth that: "Regardless of the belief expressed in the platform of 1920 that the abnormal economic situation forbade the formulation of a tariff programme to meet conditions a year ahead, the Republican leaders began

hearings on a tariff bill in January, 1921, about two months after the election."

When Professor Laughlin undertakes to change the language of the platform of 1920, in order to make it suit his own purposes, and then further mis-states what actually took place, he is evidently endeavoring to "pull the wool" over the eyes of his readers. The beginning of hearings was not the formulation of a policy; it was the beginning of the effort to ascertain facts upon which to formulate the policy. It was not until "a year hence" that the Republican majority in the House finally agreed upon that policy, and more than "two years hence" when the Republicans of both House and Senate reached an agreement concerning the rates to be enacted. As a matter of fact, that portion of the plank which Professor Laughlin did not quote shows that the Republican platform pledged Congress to the enactment of a protective tariff. The language of the remainder of the plank is:

But the Republican Party reaffirms its belief in the protective principle and pledges itself to a revision of the tariff as soon as conditions shall make it necessary for the preservation of the home market for American labor, agriculture and industry.

Professor Laughlin says—entirely in error, of course, in view of the language of the platform itself—that the 1920 platform contained no definite pledge, and that "there was again no mandate for a tariff from the country." Actual conditions in 1921 were the strongest "mandate for a protective tariff from the country" that any political party could have.

A DISCREDITED PLEA MADE FOR UNLIMITED IMPORTS.

Part II of Professor Laughlin's article is devoted entirely to that old, outworn and discredited plea, that unless we permit European countries to dump unlimited quantities of all their exportable products into this market, unhindered by protective duties, those countries cannot be expected to pay their war debts to the United States. Even if this were true, as was repeatedly pointed out during the tariff debates of the Sixty-seventh Congress, a tariff policy based upon such a theory would have to presuppose the early repayment of all

war debts as being of greater importance than sustaining American industries and keeping our people steadily and profitably employed.

But the fact of the matter is—as Professor Laughlin himself must know, if he is a reader of the newspapers—that the existing tariff law not only has not reduced either imports or exports, but has become the fundamental cause of a national prosperity under which both imports and exports have steadily remained at figures never before equalled in the history of this country. In view of these facts, one would suppose that Professor Laughlin would hesitate to employ an argument which already has been so completely discredited.

Anglo-American Trade, official publication of the American Chamber of Commerce in London, which most vigorously opposed the Fordney-McCumber Tariff Bill with just such arguments as Professor Laughlin at this late day attempts to bring to bear, had this to say in a carefully-prepared editorial in the February (1923) issue:

This Chamber . . . viewed with concern the progress of events leading up to the enactment of the Emergency Tariff in 1921, which was followed by the passing of the Tariff Act in September, 1922; it shared the apprehensions of American exporters and others interested in America's foreign trade, as to the unsettling effects which the Fordney Tariff might produce.

Therefore, since it was passed, the effect of the Tariff Act on British merchandise imported into the United States has been watched with interest. Statistics to date indicate that it is premature to say . . . that the tariff will cause a falling off of British imports into the United States. This statement is made after careful consideration and study of facts and figures. As a means for arriving at our conclusion . . . figures giving exports (from England to the United States) in terms of volume rather than value have been used, and statistics covering only the most important exports have been selected . . . and taking these items collectively, we find no decrease in the volume, but as a rule a substantial increase.

Several articles have been contributed to Anglo-American Trade during recent months, discussing the probable effects of the tariff, and maintaining that it would not have the disastrous results prophesied by many. In so far as statistics available to date demonstrate, these arguments appear to a certain extent borne out by actual results. . . . And we can at

least point out to exporters of British goods that the Fordney Tariff Act is not a prohibitive measure.

The measured sentences just quoted, take on an added significance when it is kept in mind that they constitute what might be described as the reluctant admissions of an organization naturally antagonistic to a protective tariff, but which has taken the trouble to examine the facts, and has the courage to state the only conclusions which those facts justify.

COMPARISONS MUST BE BASED UPON COMPARABLE
CONDITIONS.

"Keep your eyes on the gates through which our imports come," says Professor Laughlin; but apparently he has not thought sufficiently well of his own advice to follow it himself.

He calls the existing tariff law "the most extreme protectionist act in all our history, a very Tariff of Exaggerations;" but in order to do so he has to run counter to the truth; and for seeming justification he is compelled to talk only in terms of rates and duties, when, as any child in the upper grades of the elementary schools knows, *ad valorem* rates mean nothing, and specific duties little more, except in conjunction with that to which they apply—foreign values. In other words, our import duties applying as they do to the foreign value of the article imported, the rates or duties of one tariff law are not properly comparable with rates or duties for the same articles in some previous tariff law, unless foreign values and American manufacturing costs are the same now as then. If protection means laying an import duty sufficient to bring the cost of a foreign product up to the cost of a similar American article, the *ad valorem* percentage which is required to accomplish that may seem direful and calamitous when inveighed against by a demagogue. Actually, however, it has no significance in itself, because, every person who has knowledge of world economic and financial conditions at the present time, knows that there are hundreds of different articles that are importable from countries where price advances have nowhere near offset the currency depreciation. No further explanation is necessary to justify the statement, therefore, that to declaim against rates, merely as such, is economic nonsense.

To illustrate the foregoing, we have but to apply the facts to some of the articles to which Professor Laughlin has made reference. For instance, in support of his allegation that the present tariff law is "the most extreme protectionist act in all our history," he speaks sarcastically of the present ad valorem rate of 70 per cent on German toys. As a matter of fact, the rate on toys was 35 per cent in both the Underwood-Simmons and the Payne-Aldrich laws. Would Professor Laughlin, with the knowledge that he must possess of how German prices (in terms of American money) now compare with German prices in the same terms prior to 1914, undertake to say that the present rate of 70 per cent returns as much duty now in American dollars, as the 35 per cent rate returned at the time when it applied?

DO EXAMPLES CITED SHOW THE LAW A "TARIFF OF
EXAGGERATIONS"?

Cheap jewelry comes largely from the same source; yet to support the statement that this is "a very Tariff of Exaggerations," Professor Laughlin has to turn to such a triviality, with the complaint that the old 60 per cent rate of the Underwood-Simmons and the Payne-Aldrich laws is now 80 per cent. He says that on cotton gloves there is a duty of 75 per cent. The language of the law is: "But in no case shall any of the foregoing duties be less than 40 nor more than 75 per cent ad valorem." He complains that chinaware bears a duty of 60 per cent; but under the Act of 1913, which Mr. Underwood repeatedly said did not provide one cent of intentional protection, the rate was 50 per cent. The lace curtain duty of 60 per cent, which is denounced, was, however, 40 per cent and 45 per cent under the 1913 non-protective tariff. These, with pocket knives, complete the list of rates to which Professor Laughlin makes specific reference to justify his criticisms of the general level of all the duties. For pocket knives the highest bracket in the present law is: "Valued at more than \$6 per dozen, 35 cents each and 55 per cent ad valorem." Professor Laughlin speaks of this item in the bill as one imposing "duties which reduced to an ad valorem rate, run from 75 to over 400 per cent." We should immensely like to see

Professor Laughlin make the calculation which gives him this latter figure.

While Professor Laughlin apparently has proceeded with more caution in his discussion of the Wool Schedule than is shown in other sections of his article—confining himself to a review of conditions prior to, during, and after the war—it seems odd, indeed, that a trained economist could even briefly discuss a tariff on raw wool and wool manufactures, especially in a critical sense, without giving some consideration to the economic importance of those industries to the nation. With the embargo conditions of the late war still fresh in everyone's mind, it might naturally have been expected that the vital necessity of a wool supply adequate, or nearly so, to the needs of the country, would have presented to Professor Laughlin a most inviting theme for economic analysis and discussion, with some statement of his conclusions as to whether an adequate protective duty, imposing only a relatively slight burden upon all consumers, is too much to pay for giving the nation a domestic wool supply nearer to its actual needs, or whether in his opinion it would be greater economic wisdom to keep wool upon the free list, and face a diminishing domestic supply, so that ultimately the American people would be entirely dependent upon foreign supplies of the raw material. Such a discussion would, of course, make it necessary to decide whether in the end the American people would be better or worse off financially, because of the enhancement of world prices of wool, caused by the fact that any great decrease in the amount of wool now produced in the United States could not be made up by a corresponding increase of production in foreign wool producing countries. All that has been said in the earlier part of this paragraph might be repeated in respect of his treatment of the dye schedule—it being understood here that the present reviewer does not assert the correctness of either the amount or the method of applying the duties upon wool and upon coal tar products in the present tariff law. But Professor Laughlin's purpose throughout seems to have been, not economic discussion, but uneconomic denunciation.

HIS IGNORANCE OF AMERICAN VALUATION PLAN COLOSSAL.

In Part VI of his article, discussing the American Valuation basis of assessing ad valorem duties, which plan eventually was rejected by Congress except in respect of coal tar products, Professor Laughlin shows what must be accepted either as the densest ignorance, or a design deliberately to deceive his readers, for he asks his readers to believe that the purpose of the American Valuation Plan was to apply to the higher American value, the same percentage rate which, when applied to the foreign value, would have returned a protective duty. "That is," he explains, "if the duty were 40 per cent ad valorem, the duty on an article costing \$1.00 in Europe, under the old system would be 40 cents; but, under American Valuation, the duty of 40 per cent is levied on a price which includes not only a variety of expenses, but the very duty itself, so that the actual duty is at least doubled, or 80 per cent." It is difficult to write calmly of such a statement when it cannot be forgotten that the author is a professor of economics in a well-known American university. Every one sufficiently familiar with the discussions of the American Valuation Plan to enable him to express an opinion about it, knows that there never was a proposal or an intent to use any set of rates, based upon application to the foreign value, and without change make them applicable to the American values. The attempt to convey such an impression is not worthy of an intelligent writer upon the tariff. The principle upon which protective duties are determined is for Congress first to learn the amount of duty needed to measure the difference between foreign and domestic production costs, and then to fix a rate (if ad valorem) which, when applied to whatever may be the basis of valuation, will produce that sum of duty. If 40 cents of actual duty is required, it makes no difference whether that sum is obtained by a 40 per cent duty applied to a foreign value of \$1, or by a 20 per cent duty applied to the \$2 American value of a like product. The Treasury experts who were advisors upon that subject to the Committees of Congress had worked out formulae for the conversion of rates for American values to equivalents for foreign values, and vice versa, so that for whichever method

finally might be adopted any necessary changes in rates could be made, to return the same amount of duty. The one great difference in the two methods is that under the present foreign valuation plan, because of differing production costs, no two foreign nations pay exactly the same sum of duty under the same *ad valorem* rate; while, under American valuation, all countries would pay the same sum of duty upon a like article at any given time.

AN UNINTERRUPTED PROCESSION OF MISREPRESENTATION AND CARELESS REASONING.

Much more could be written by way of pointing out errors, oversights, discrepancies and mis-statements in Professor Laughlin's article; but already we have exceeded the ordinary bounds of a brief review; and perhaps after all, the Professor best portrays his own competency to discuss the protective tariff question when he says, in Part VII of his article: "Equilization [of production costs] flies in the face of international division of labor, is aimed at wiping out all relative advantages, and, carried out logically, would result in universal protection and the cessation of all foreign trade."

There are many factors which Professor Laughlin apparently has entirely overlooked in making that statement. He seems to be unacquainted with the fact that protection has made possible the development of many industries to a degree of efficiency that has progressively reduced the necessity for protection, notably in many products of the iron and steel industry and tin plate, and that others will undoubtedly attain the same measure of independence. He seems also to have ignored the fact that there are many things which are produced in foreign countries, which are not subject to any duty, so that if all countries did adopt adequately protective rates upon such things as it would be advantageous for them to produce, and which they could not produce without protection, there still would be an ample residuum for a great international trade.

Reviewing the article as a whole, perhaps the most remarkable thing about it is that it could have obtained publication in any magazine assuming even the most ordinary responsibility for the soundness and accuracy of that which it prints.

It is difficult to conceive how any well-informed editor, even if not himself an economist or close student of the tariff subject, could approve and publish such an uninterrupted procession of error, misrepresentation and obviously loose and careless reasoning.

D. W. F.

WOOL SUPPLIES AND CONSUMPTION.

MACHINERY REQUIREMENTS IN EXCESS OF PRODUCTION.

BY SIR ARTHUR GOLDFINCH.

THE appended article, treating of the wool supplies and consumption, prepared by Sir Arthur Goldfinch, English Chairman of the British-Australian Wool Realization Association, Limited, was part of a report submitted recently to the shareholders by the directors of the Association. Coming from a man so well versed in wool supplies, production, and consumption, it will be received as an authoritative deliverance on the subject. It shows (although because of the author's well known pessimistic views as to the supply of fine wools, it may have to be accepted with some caution and allowance) clearly enough that the world's machinery is consuming more wool than is produced by the world's flocks, that condition being sufficient to raise wool prices considerably above former customary rates without the passage of any law requiring the marking of wool fabrics to show their fiber content. The article is reprinted in these pages because of its historic value, in the belief that it will be useful in future years to students of the wool manufacture in the United States and other countries. It was as follows:

It is now possible to make with considerable approximation to accuracy an estimate of the quantities of wool purchased by the trade in the 1922 season, and compare it with the supplies available for 1923. The figures in the case of Australia and New Zealand are given for the sake of uniformity for seasons ending June 30, while for the River Plate and South Africa, shipments up to September 30 are taken. The latter method gives the nearest approximation to the consumption in the calendar year, but as it happens, it would make no material difference if sales of Australasian wool for years ending September 30 had been taken.

In the following tables, Russia and Turkey are totally excluded, and Asia only figures in respect of the exports of China and British India. If it were possible to obtain accurate figures for the whole world, the totals would be increased by

about 300,000,000 pounds. This would not alter the comparison between 1922 and 1923. It appears to be certain that the production of wool in Russia and Turkey has been diminished very greatly, probably by one-half since 1914. If order was restored and the flocks re-established, the inhabitants of those countries would use practically the whole of the increased wool production domestically as they have borne the whole of the deficiency.

TABLE I.

WOOL PURCHASED BY THE TRADE IN 1922.

| | | |
|--|---------------|--------|
| A. | | |
| Auction sales, July 1, 1921 to 1922. | | Pounds |
| Australian wool, 2,900,000 bales† | 950,000,000 | |
| New Zealand wool, 720,000 bales† | 250,000,000 | |
| Shipments, September 30, 1921 to 1922. | | |
| Argentine wool, 476,217 bales | 440,000,000 | |
| South African wool | 234,000,000 | |
| | <hr/> | |
| | 1,874,000,000 | |
| B. | | |
| Uruguay shipments, Sept. 30, 1921-2 | 92,000,000 | |
| British India, China, Brazil, Chile, Algeria, and other exporting countries | 230,000,000 | |
| European production almost entirely consumed in country of origin (excluding Russia) | 540,000,000 | |
| North and South American wool domestically consumed | 320,000,000 | |
| | <hr/> | |
| | 1,182,000,000 | |
| | <hr/> | |
| | 3,056,000,000 | |

†Note.—A large deduction from reported auction sales has been made to cover with excess wool resold in London after previous sale in the Dominions.

TABLE II.

1922-3 CLIPS.

| | | | |
|----------------------------|-----------------------|----|---------------|
| A. | | | Pounds. |
| Australia, 1,850,000 bales | } Maximum estimate. { | .. | 605,000,000 |
| New Zealand, 535,000 bales | | .. | 188,000,000 |
| Argentina, 220,000 bales | | .. | 205,000,000 |
| South Africa | | .. | 180,000,000 |
| | | | <hr/> |
| | | | 1,178,000,000 |

B.

| | |
|---|---------------|
| Approximately the same supplies from the rest of the world as in the previous year. | 1,182,000,000 |
| | <hr/> |
| | 2,360,000,000 |
| Stocks of Australian and New Zealand wool in B. A. W. R. A.'s hands at December 31, 1922 913,000 bales. | 300,000,000 |
| | <hr/> |
| Total supplies | 2,660,000,000 |

It appears from the above tables that in 1922 the trade purchased 696,000,000 pounds of wool more than the probable total of the current clips (1922-3 in the Southern hemisphere and 1923 in the Northern). The excess is made up of about 400,000,000 pounds of Australasian, 235,000,000 pounds of Argentine, and 54,000,000 pounds of South African wool. The figures in respect of these countries are authentic and cannot be questioned or explained away. The figures given under "B" are not so precisely ascertained as those under "A." Admittedly, there are a number of countries under "B" of which the statistics are unreliable, but this applies to that part of the production which is consumed in the country of origin, and inaccuracies of that character do not affect the balance of supply and consumption from the point of view of the great importing countries: the United Kingdom, United States, France, Germany, Japan, Belgium, Italy and Poland.

The statistics above given are in agreement with the notorious fact that the accumulations of old wool have disappeared from the market, and that with the exception of B. A. W. R. A.'s holdings (913,000 bales) there were, broadly speaking, at the end of 1922 no stocks whatever in first hand outside the new wool coming to port after shearing. No authority would have placed the stocks of old wool in first hands at June 30, 1921, at less than 3,000,000 bales Australasian wool and 250,000 bales South American wool (the current estimate of the latter was then much higher) making in all over 1,200,000,000 pounds of wool. Of those stocks only 300,000,000 pounds now remain, all in B. A. W. R. A.'s hands.

When comparisons of this kind are made, it is invariably replied that private stocks have increased very largely and that it is unreasonable to infer that wool purchased by the trade passes through the machinery in the same period. About a year ago I estimated that in 1921 (excluding Russia and Asia) 2,600,000,000 pounds of wool passed through the machinery, exceeding the new growth by about 260,000,000 pounds. It was then stated that I had made an insufficient

allowance for the increase of stocks in the hands of the trade, the active purchasing in September to December, 1921 being largely speculative.

STOCKS IN FOREIGN COUNTRIES.

To whatever extent that criticism was true it diminishes the increase which may reasonably be calculated to have taken place in 1922. As a matter of fact, that increase, taking the world as a whole, cannot be large. There is no increase at all in the United States which is bracketed with the United Kingdom as the largest wool consumer. The official statistics show a reduction in the United States stocks from 460,000,000 pounds at September, 1921, to 420,000,000 pounds at September, 1922. France, Belgium and Germany are to-day buying wool in astonishingly large quantities considering the position of their exchanges and the international situation. Their aggregate stocks of wool may be slightly larger than a year ago, but it is hard to believe that the increase amounts to 50,000,000 pounds.

Japan and the smaller manufacturing countries quite evidently live from hand-to-mouth in the matter of wool supplies. There remains only the United Kingdom where traders can possibly be holding an abnormal stock of wool. I confidently assert that the stock in this country—not only of raw wool but of wool, tops and yarns,—in traders' hands was not on December 31, 1922, 100,000,000 pounds in excess of a year before, and that the increase in the whole world was well under 150,000,000 pounds.

I think all the available information points to the conclusion that the year 1922 surpassed all previous records in the following three respects:

- (a) Purchases of raw wool by the trade.
- (b) Wool passed through the machinery.
- (c) Wool textiles sold over the counter to the actual consumer.

RECORD OUTPUT LAST YEAR.

The boom year 1919-20 was a year of astonishing profits (largely on paper), and the pressure of orders on English manufacturers was so unprecedented during the six best months that it may seem strange at first sight to assert that the volume of actual business taking the world over was far greater in 1922; but the fact is that even in England combs and spindles had a larger output in 1922 than ever before. The United States equalled or exceeded the abnormal war years 1917 and 1918, which in their turn had far exceeded all previous figures, and the Continent of Europe in the aggregate

returned to pre-war figures, whereas in 1919 three-quarters of its machinery was out of action.

In spite of the great trade activity of 1922, there is no evidence of over-trading, no indication whatever that given reasonable international conditions the trade of 1923 will too eagerly absorb the entire wool supplies available. That the total turnover in 1923 can equal that of 1922 is manifestly impossible, for the simple and sufficient reason that the supplies of wool will not permit of it. Some relief will probably be granted by a diminution of demand from Germany—possibly to the extent of 100,000,000 pounds—but even a much larger diminution than this would still leave abundant reason to believe that the manufacturing countries will compete actively for, and will be capable of readily absorbing, the last available pound of wool.

There is now no excessive supply of textiles hanging over the market at any stage of distribution, and if financial and economic conditions are not decidedly worse than in 1922, the world's markets will readily absorb the entire machinery output of wool textiles which will necessarily be somewhat less than in 1922, even if all surplus stocks of wool are used up and full use is made of shoddy and other substitutes.

The following is the nearest estimate which can be made of the wool passing through the machinery in 1922, omitting Russia and all Asia, with the exception of Japan.

| | Pounds. |
|--|---------------|
| United Kingdom..... | 725,000,000 |
| United States..... | 750,000,000 |
| Germany..... | 425,000,000 |
| France..... | 525,000,000 |
| Belgium..... | 110,000,000 |
| Italy..... | 120,000,000 |
| Spain..... | 150,000,000 |
| Poland, Czecho-Slovakia and Austria..... | 120,000,000 |
| Japan..... | 60,000,000 |
| Other European Countries..... | 60,000,000 |
| Other Countries..... | 60,000,000 |
| | <hr/> |
| | 3,105,000,000 |
| Less estimated duplications..... | 100,000,000 |
| | <hr/> |
| | 3,005,000,000 |

The following explanatory remarks may be useful. The amount of wool retained in the United Kingdom during 1921 and 1922 (*i. e.*, imports plus clips minus exports) is estimated at 1,190,000,000 pounds, not including sheepskins or hair.

The stock of wool in the hands of B. A. W. R. A. during the two years decreased by 200,000,000 pounds. Making allowance for wool from imported sheepskins, it seems reasonable to conclude from these figures that the wool passing through British machinery in the two years was in excess of 1,250,000,000 pounds, of which about 725,000,000 pounds may be supposed to have been consumed in 1922.

THE AMERICAN ESTIMATES.

The current estimate for the United States—taking the official returns plus an estimate of the wool consumed by mills not making returns—is 803,000,000 pounds. In my opinion the American estimates are somewhat exaggerated by their method of converting scoured and skin wool into the grease equivalent. I have, therefore, placed the figure at 750,000,000 pounds.

According to the Customs House returns, the amount of foreign wool retained in Germany in 1922 was 406,000,000 pounds, and the estimate of 425,000,000 pounds passed through the machinery is moderate. The retention in France according to the same returns was 630,000,000 pounds, to which the domestic clip has to be added. I have placed the consumption at only 525,000,000 pounds because a comparison of the official figures of the exporting countries with the French Customs House returns leads me to the conclusion that French imports have been seriously over-estimated in the returns.

The estimate of 150,000,000 pounds consumption for Spain is decidedly in excess of the known machinery capacity, but a still greater figure of production would have to be accepted to account for the domestic wool clip of 165,000,000 pounds with which it is credited in the preceding table. In my opinion the Spanish figures on both sides are considerably exaggerated, but if both were reduced by 30 or 40 per cent there would be no change in the balance. The allowance of 100,000,000 pounds which I have made at the bottom of the table for estimated duplications is intended to cover tops and other treated wools which are liable to be included in the consumption figures both of the country in which the wool is first treated and the country in which the manufacturing process is finished.

It will be seen that these estimates of consumption—which taken as a whole are somewhat on the low side—account almost in their entirety for the quantities estimated in the preceding table to have been taken over by the trade in 1922. This agrees with my view that when allowance is made for the known diminution in the United States, the aggregate

increase throughout the world in stocks of wool held by the trade is under 100,000,000 pounds.

GENERAL OBSERVATIONS.

The following broad general observations may now confidently be made:—

1. In the years before the war, supply and consumption were nicely balanced. (The quantity was estimated at about 2,700,000,000 pounds of raw wool excluding Russia and all Asia except China and British India.) The tendency was for increase of consumption slightly to exceed the increase of production, the mills being brought nearer to the wool on the sheep's back by increasing rapidity of transport and distribution.

2. During the war Germany, Austria, Northern France and Belgium diminished their consumption of wool in a rapidly increasing proportion, the diminution by the end of 1916 being at least four-fifths. The textile machinery put out of action during the last two years of the war when the blockade was complete, was between 25-30 per cent of the world's total.

3. The British Empire and the United States slightly increased their consumption of wool and textiles during the war, but the net diminution the world over was about 15 per cent per annum.

4. The accumulation consequent upon the reduced consumption above mentioned amounted at the end of the war to about 1,300,000,000 pounds, or about 50 per cent of a year's production for the world (made up of about 10 per cent per annum for the first two years of the war and about 15 per cent for the last two years when the blockade was complete).

5. All this accumulation was in the Southern hemisphere. The scarcity of tonnage caused the local scarcity of wool in the chief consuming countries to continue until the middle of 1920. The textile machinery of Germany, Austria and Poland for financial and political reasons, and of Belgium and Northern France for physical reasons, did not get into full working order till late in 1920. These special circumstances combined with the spirit of sanguine speculation which then pervaded all trade brought about the boom of 1919 and 1920 with its unheard of prices for wool and the equally unprecedented profits to manufacturers.

6. The slump that followed was also unprecedented as regards the fall in prices and consequent trade losses. Its severity in respect of decline in consumption has been much exaggerated. As a matter of fact, there has been no period

of twelve months since the war when the amount of wool passing through the machinery throughout the world has been less than a year's growth. Possibly, the consumption fell below that level during the worst period of the slump—roughly the first half of 1921—but at all other times, however badly profits may have compared with the boom period, consumption was somewhat in excess of the growth of wool and was eating into the accumulations of the war period.

WORLD'S TEXTILE PLANT AND SUPPLIES.

It must be remembered that, before the war and to a greater extent since, the wool textile plant of the world has been permanently in excess of the growth of wool and, presumably, also of the effective demand for wool textiles. Short time, therefore, for a part of the year or over some parts of the manufacturing countries is the normal state of affairs, but the long period during which 25 per cent of the world's plant was out of action has caused this fact to be forgotten.

7. The production of wool has diminished since 1913 in the United States, the Argentine Republic and Uruguay by about 250,000,000 pounds per annum. The greater part of this reduction is likely to be permanent. The rest of the world, excluding Russia and Turkey which have decreased in greater proportion, shows a slightly declining tendency.

8. The consumption of wool was in 1922 greater than 1913 by at least one-eighth, the chief increase being in the United States, and would probably continue to increase as population increases if the necessary quantity of wool were available at anything like the present range of prices. As the necessary quantity cannot possibly be grown until large new areas come under sheep, there will be a marked tendency for prices of "virgin wool" to rise and for the use of shoddy as a substitute to return to maximum figures. There is at present no other possible substitute, cotton being relatively dearer than wool.

It must, of course, be remembered that any approximation to the 1919-20 prices of wool would have a tendency to check consumption. So great a rise it is hoped and believed will be avoided, but in spite of the serious check to German consumption which the political and economic crisis in that country will almost inevitably bring about, a general shortage of wool supplies is now clearly in sight and will shortly make itself sharply felt. Expressed in percentages, the rise in cross-breds will probably be considerably greater than the rise in merinos.

TEXTILE BRANDING BILLS IN STATE LEGISLATURES.

TEXT OF THE BILLS URGED FOR ENACTMENT IN 1923.

TRUE to the assertion made by Mr. George M. Wilber when testifying before the Senate Sub-Committee of the Committee on Interstate Commerce on June 4, 1921 that "unless this bill [meaning the French-Capper bill] becomes a Federal law, there will be plenty of state legislatures passing similar bills next year, at least twelve such bills were introduced into the legislatures which were in session this past winter. That they were introduced and advocated was due largely to the efforts of members of the Farm Bureau Federation in the several states, the publicity committee appointed on November 30 by the Wool Committee of the American Farm Bureau Federation, and representatives of wool growers in the several states. An important matter to remember is that in no instance, so far as our information goes, except in Ohio where some women's clubs favored the bill, were these bills suggested, or advocated by any body of consumers, the very persons who, the proponents of the legislation assert, should be protected. It is surprising, indeed, after all the agitation of this question on the platform, in the press, Congress, and state legislatures, that the public has not become aroused by the misrepresentations with which the propaganda abounds. We suspect it is not convinced of the bill's necessity, practicability, or the results claimed for it by its insistent advocates whose political and financial interests in its enactment color their viewpoint and dominate their action.

For the purpose of keeping up the record of this effort, we have here assembled the bills which were proposed this year. In a number of cases the same bill, the Wyoming statute, was the one introduced. It is printed but once in full, and to save space when used in other states, it is simply stated that it is similar to the Wyoming law.

The bills introduced, except where they were duplications appear in the pages which follow.

IN CALIFORNIA THE WYOMING LAW WAS USED.

In the California Legislature, Mr. George W. Cleveland introduced on January 17, 1923, Assembly Bill No. 99, which was referred to the Committee on Manufactures. The text is as follows:

An act requiring the marking or labeling of all cloth, fabrics, garments or articles of apparel sold or offered for sale in this state which contain wool, or purporting to contain wool, and of all samples containing, or purporting to contain, wool displayed in this state in soliciting orders and providing for punishment for violations of the act.

The people of the State of California do enact as follows:

SECTION 1. Every person, firm or corporation selling or offering for sale in this state any cloth, fabric, garment or article or [of] apparel containing wool, as herein defined, or purporting to contain wool, or displaying in this state any sample of cloth, fabric, garment or article of apparel containing wool, or purporting to contain wool, shall place thereon a conspicuous mark or label in one of the three following forms:

1. All virgin wool.
2. Not less than———per cent virgin wool.
3. No virgin wool.

Virgin wool as herein defined is wool which, previous to its use in the labeled or marked article, never has formed any part of any cloth, fabric, garment or article of apparel. In the event that any article is labeled in the form indicated as number "2" above, the blank in such form shall be filled in with some percentage; *provided, however*, that in labeling or marking any garment or article of apparel which contains lining, facing or trimming, the label or mark shall not refer to the lining or facing or trimming, or the percentage or percentages of wool contained therein.

SEC. 2. Any firm, person or corporation who shall violate any part of this act, or who shall by label or mark state that the labeled article contains a greater percentage of virgin wool than it does contain, shall be guilty of a misdemeanor and upon conviction thereof shall be punished by a fine of not less than twenty-five dollars (\$25) nor more than five hundred dollars (\$500), or by imprisonment in the county jail for not less than ten days nor more than sixty days, or by both such fine and imprisonment.

SEC. 3. This act shall take effect and be in force from and after January first, one thousand nine hundred twenty-four.

The bill, we are reliably informed, "died in the Assembly Committee."

Not satisfied with introducing the foregoing bill, Mr. Cleveland also introduced on January 31, 1923, Assembly Joint Resolution No. 14 which was referred to the Committee on Federal Relations. It was as follows:

Assembly Joint Resolution No. 14—Relative to the indorsement of the "Capper-French Truth in Fabric Bill"; to require woolen manufacturers to indicate by labels the percentage of virgin wool in fabrics.

WHEREAS, There has been introduced in the senate of the United States a bill known as the "Capper-French Truth in Fabric Bill," senate bill number 799; and

WHEREAS, A similar bill has been introduced in the house of representatives, H. R. "Bill number 64"; and

WHEREAS, The purpose of said bill is to require that manufacturers of woolen goods attach to the manufactured fabrics labels indicating the percentage of virgin wool and the percentage of re-worked wool or shoddy contained in said manufactured fabric; and

WHEREAS, The sheep and wool industry is a large industry in the state of California, and continually growing in importance; now, therefore, be it

Resolved, by the assembly and the senate, jointly. That the legislature of the State of California at its forty-fifth regular session does respectfully urge upon the senate of the United States and the house of representatives, the adoption of said "Capper-French Truth in Fabric Bill" and the imperative need for the immediate enactment of the same; and, be it further

Resolved, That a copy of this joint resolution be sent, by the chief clerk of the assembly, to the president of the United States and to each member of the congress of the United States, from the State of California.

In April it was passed by the Legislature and sent to the Governor.

It is of interest in this connection to know whence the resolution came and who sponsored it. Writing to the *American Sheep Breeder and Wool Grower* for March, 1923, Mr. W. P. Wing, Secretary of the California Wool Growers Association, said:

It might interest you to know that the California Wool Growers Association has endorsed the Truth in Fabric bill.

We have sent letters to our Congressmen and Senators, and a telegram to J. H. Wilson, and have introduced a resolution in the California Legislature asking them to pass a resolution to Congress to pass the Truth in Fabric bill.

COLORADO'S LAW.

In Colorado, the bill was based upon the Wyoming statute, but with several additions and changes which necessitate its reproduction. It adds a new Section, I, wherein the Act is described as "The Truth in Fabric Law"; and the definition of "virgin wool" is broadened so as to include only wool which "has not heretofore been used." The full text of the bill is as follows:

An Act to provide for the labeling of all cloth, fabric, garments or articles of apparel sold or for sale within the state of Colorado which contain wool or purport to contain wool and of all samples containing or purporting to contain wool displayed in the state of Colorado, in soliciting orders therefor and providing for punishment for violations of this act.

Be it Enacted by the General Assembly of the State of Colorado:

SECTION 1. This Act shall be known and designated as "The Truth in Fabric Law."

SECTION 2. Every person, firm or corporation selling or offering for sale any cloth, fabric, garment, or article of apparel containing wool or purporting to contain wool shall place thereon a conspicuous label in one of the three following forms:

1. All virgin wool.
2. Not less than.....per cent virgin wool.
3. No virgin wool.

SECTION 3. Virgin wool is wool which previous to its use in the labeled article has not theretofore been used and has not formed any part of any garment or article of apparel. In the event that any article is labeled with Form No. 2 as by this Act provided, such form shall state the percentage of virgin wool contained in such cloth, fabric, garment or article of apparel, provided further that in labeling any garment or article of apparel which contains lining, facing or trimming, the label shall not refer and shall not be taken to refer to the lining or facing or trimming or the percentage of wool contained therein.

SECTION 4. Any person, firm or corporation or the agent of any such person, firm or corporation who shall violate any part of this Act or who shall by label state that the labeled article contains a greater percentage of virgin wool than it

actually contains shall be guilty of a misdemeanor and upon conviction thereof shall be punished by a fine of not less than \$25.00 nor more than \$100.00 or by imprisonment in the county jail for not less than ten days nor more than sixty days or by both such fine or imprisonment, provided that the sale or the offer of sale as to each piece of cloth, fabric, garment or article of apparel shall constitute a separate and distinct violation thereof and such violations shall be considered cumulative and may be joined in one action.

The bill was introduced into the House by Mr. Calkins, was referred to the Committee on Merchandise and Manufactures, and was passed on February 9, so far as we are informed, without any hearings having been held, and sent to the Senate for concurrence.

In the Senate, it was referred to the Committee on Agriculture and Irrigation on the same day, and on April 6, 1923 that Committee referred the bill to the Committee of the Whole with the recommendation that it be passed.

In the Senate, Section 2 was amended by vote of 20 to 6 to read as follows:

SECTION 2. Every person, firm or corporation selling or offering for sale any cloth, fabric, garment or article of apparel containing wool or purporting to contain wool shall, provided that the information necessary to comply with this Act shall have been furnished by the manufacturer, wholesaler or other source from which the fabric shall have been purchased, place thereon a conspicuous label in one of the three following forms:

1. All virgin wool.
2. Not less than.....per cent virgin wool.
3. No virgin wool.

The bill as thus amended was passed by the Senate April 13, and the House concurring in the Senate amendments passed the bill the same day. It was signed by the Governor, and was filed in the office of the Secretary of State at 4.30 p. m., April 16, 1923.

IDAHO'S LEGISLATORS REJECTED THE WYOMING LAW OFFERED.

In the Idaho Legislature the Wyoming law was introduced. The text was identical with that law, except that Section Three was different. It was as follows:

SEC. 3. Any cloth, fabric, garment or article of apparel for sale, or to be offered for sale, in the hands of any person,

firm or corporation in the State of Idaho at the date this act takes effect, may be labeled with the words "On hand prior to act" in lieu of the label required and provided for in Section 1 of this act.

Idaho is the home of Representative French, introducer into the United States House of Representatives of the French bill, and advocate of it, and also of United States Senator Frank R. Gooding, ardent champion of the bill. Notwithstanding these facts, the Senate voted on February 20, 1923 to indefinitely postpone the bill. Idaho is one of the great sheep states of the Rocky Mountain region, and here also it is to the credit of the intelligence and courage of the senators that they were not dragooned by threats into supporting this proposed legislation.

In a speech delivered at Boise on January 22, 1923 to the Idaho Wool Growers Association, its President, Hugh Sproat, among other things said:

We should give every encouragement to the passage of a State Truth in Fabric bill at the present legislature, sufficient time being given to retailers and wholesalers in the state to dispose of their present supply of materials before the law becomes effective. (*National Wool Grower*, March, 1923, p. 27.)

Writing to the *National Wool Grower* for April, 1923, Mr. Sproat said:

It certainly was the wrong year for wool growers to get any favorable legislation from the Idaho legislature. . . . However, no bills were passed harmful to our industry, and it would seem that while the legislature would do nothing for us, they were appreciative enough of our business to do nothing to hurt us. . . . We tried to have enacted a Truth in Fabric bill, but this died borning.

IOWA'S BILL WOULD REQUIRE USE OF DOMESTIC WOOL.

The Iowa bill based on the Wyoming law in part, is an anomaly, indeed. The purpose of this movement could scarcely be made more evident if a studied attempt had been made. The provision in Section 1 defining virgin wool "as wool of the domestic sheep" makes clear beyond peradventure of a doubt that the real purpose of this kind of legislation, however much its proponents may protest, is to secure a law by whose operation it is hoped to increase the price of wool

to the growers, rather than to give to purchasers information of value in the selection of fabrics or garments. The text of the bill is as follows:

An Act to require the labeling of yarn, bedding, cloth, fabrics or articles of apparel containing or purporting to contain wool, offered for sale in this state and of samples of materials containing or purporting to contain wool, displayed in this state in soliciting orders; providing penalties for violation, and methods of enforcement of its provisions.

Be It Enacted by the General Assembly of the State of Iowa:

SECTION 1. Every person, firm or corporation selling or offering for sale in this state any yarn, bedding, cloth, fabric, or article of apparel containing wool, or purporting to contain wool, or displaying in this state any sample of cloth, fabric, garment or article of apparel containing wool or purporting to contain wool shall place thereon a conspicuous label in one of the three following forms:

Form No. 1. All Virgin Wool.

Form No. 2. Not less than.....per cent Virgin Wool.

Form No. 3. No Virgin Wool.....per cent re-worked wool.

For the purposes of this act, virgin wool is defined as wool of the domestic sheep, which, previous to its use in the article labeled in accordance with the provisions of this act, has never been used in or formed any part of any cloth, fabric, garment or article of apparel. Provided, however, that in labeling any garment or article of apparel which consists in part of lining, facing or trimming, the label shall not be taken to refer and shall not refer to the lining, facing or trimming or the percentage or percentages of wool contained therein.

SEC. 2. When in labeling any article in accordance with the provisions of this act "Form number 2" is used, in the blank space in such form there shall be inserted in figures the percentage of virgin wool contained in the article so labeled and when "form number 3" is used, in the blank space in such form there shall be inserted in figures, the percentage of re-worked wool contained in the article.

SEC. 3. The provisions of Section one (1) of this act as to labeling, shall become effective January 1, 1924, and any yarn, bedding, cloth, fabric or article of apparel as described in this act, for sale or to be offered for sale, which is in the hands of any person, firm or corporation in this state, on the above date, shall be labeled with the label "On hand prior to January 1, 1924, in lieu of label required by Section 1 of this act."

SEC. 4. To carry out the provisions of this act, the Dairy and Food Commissioner is instructed and empowered to take

samples of any cloths, fabrics, garments or articles of apparel sold or offered for sale in this state or any samples of same displayed in this state in soliciting orders and which contain wool or are purported to contain or be composed of wool, and by the best known methods, to determine the ingredients, and for these purposes is empowered to employ such assistance and secure such laboratory equipment as he may deem necessary. It shall be the duty of the attorney general and the county attorneys in their respective counties to enforce the provisions of this act.

SEC. 5. Any firm, person or corporation who shall violate any provision of this act shall be guilty of a misdemeanor and upon conviction thereof, shall be punished by a fine of not less than twenty-five dollars (\$25.00) nor more than one hundred dollars (\$100.00), or by imprisonment in a county jail for not more than thirty (30) days.

SEC. 6. All acts or parts of acts in conflict with the provisions of this act are hereby repealed.

The above bill was introduced into the House on February 22, 1923 by Mr. Carter and referred to the Committee on Animal Industry. On March 26 the Committee recommended its passage. On April 11, it was referred to the Sifting Committee and died in its hands.

In the Senate the bill was introduced on February 22, 1923 by Mr. Shinn and was referred to the Committee on Agriculture. On March 24 that Committee reported it without recommendation. On April 5 it was ordered to the foot of the calendar and on the following day it was referred to the Sifting Committee, where it remained when the Legislature adjourned.

Here, too, as in other states, wool growers were the men behind the demand for the passage of the bill. Mr. V. G. Warner, Secretary-Treasurer of the Iowa Fleece Wool Growers Association, made this plain in his letter published in the April number of the *American Sheep Breeder and Wool Grower* where he wrote:

I am writing to tell you of the progress the Iowa Fleece Wool Growers Association is making in Iowa. We have had the Truth in Fabric bill introduced into the House and Senate. Have had public hearings before the Senate and House Committee and the bill is now recommended out for passage. I feel sure that this bill will pass.

It will be noted also that to carry out the provisions of the

act governing the marking of textile fabrics and clothes, "The Dairy and Food Commissioner is instructed and empowered to take samples, etc. and by the best known methods [which are not infallible] to determine the ingredients."

IN SENATOR CAPPER'S STATE OF KANSAS.

Bill No. 41 introduced into the Kansas Senate by Mr. Culp is a copy of the Wyoming law. Its fate again proves the truth of the old axiom that "a prophet is not without honor save in his own country." Notwithstanding the fact that Senator Capper is sponsor in the United States Senate for the bill which bears his name for the compulsory branding of textile fabrics and clothes containing wool, the bill intended to compel this in the State of Kansas never got out of the Committee to which it was referred, having been killed by the action of that committee whose members evidently saw its real purpose and the impossibility of enforcing its provisions.

MICHIGAN'S BILL AND IOWA'S ALIKE.

In Michigan the bill, No. 324, introduced into the House on March 9, 1923 by Mr. Sanson was a copy of the one introduced into the legislature of Iowa on February 22, except that the enforcement of the act was placed in the State Department of Agriculture, whereas in Iowa it was entrusted to the Food and Dairy Commissioner. The bill was referred to the Committee on State Affairs, was reported favorably by that Committee on April 12, and placed on general orders.

On April 24, the bill was defeated in the House by a vote of 44 to 35.

In explaining his vote for the bill, Mr. Henze made the following statement:

I voted for this bill as it is a step towards publicity on goods. However, I can not refrain from saying that in my opinion it is class legislation to the extent that it is fostered by the Michigan State Farm Bureau in the interest of its own wool department. In fact, it appears to be more of a "protective tariff" for its own business than in the interest of the public. That is where this bill differs from the Henze Fabric Bill. The Henze Bill was in the interest of the entire public, and not in the interest of the Farm Bureau. Probably that is why Mr. McBride of the Farm Bureau two years ago opposed

the Henze Bill. In regard to this bill, I want to say it is but a sample of one of the activities of the Farm Bureau in favor of class legislation.

MINNESOTA HAD A BILL OF ITS OWN.

The bill introduced by Mr. Girling into the legislature of Minnesota, House File No. 165, was not restricted to fabrics containing wool, but also covered those made of "cotton, silk, grass, paper, wood fiber or other material", as well. If made of mixed materials "such label shall indicate the character and quality of the mixture, also the percentage of each kind of material employed in the manufacture thereof." A proviso attached to the end of Section I required, in the case of fabrics or clothing made from wool, the label to "indicate whether the same is made from virgin wool or shoddy and the percentage of same."

The text of the bill was as follows:

A Bill for an act relating to the sale and the offering for sale of fabrics in this State and providing penalties.

Be it enacted by the Legislature of the State of Minnesota:

SECTION 1. All manufacturers of cloth fabrics offered for sale in this state, such as those made of wool, cotton, silk, grass, paper, wood fiber or other material, and all dealers in such fabrics, or in clothing made from such fabrics, located within this state shall indicate by label affixed thereto the character of the material used in the manufacture of such cloth fabrics, and the character and quality of the material used in such manufactured articles of clothing. And if such cloth fabric is made of mixed materials, such label shall indicate the character and quality of the mixture, also the percentage of each kind of material employed in the manufacture thereof. Said label shall be so affixed thereon, up to the time of sale and offering to the consumer, that the purchaser may readily ascertain therefrom whether such cloth is woven from one or several kinds of materials and the percentage of the varieties and kinds of materials used in the fabrics. Provided that in case such fabric or clothing is manufactured from wool, the label hereinbefore provided for shall indicate whether the same is made from virgin wool or shoddy and the percentage of same.

SECTION 2. Any person who shall violate any of the provisions of this act shall be guilty of a misdemeanor.

SECTION 3. This act shall take effect and be in force from and after September 1st, 1923.

The committee to which the bill was referred heard those who favored and those who opposed its enactment. After such hearings the committee unanimously voted to return the bill to its sponsor, inasmuch as they could see no merit in it.

MONTANA'S LEGISLATURE REJECTED THE BILL OFFERED.

In Montana a bill similar to the one introduced into the legislature in 1922 was again introduced, but it was killed by adverse action of the committee before it reached the floor of the House. The text of the former bill can be found in our Bulletin for July, 1922, page 354.

An effort was made in the summer and autumn of 1922 to get a bill similar to the Wyoming law before the voters of the state by means of the initiative and referendum, but the petitions circulated were not signed by a sufficient number of voters to secure the submission of the bill for a vote at the election in November, 1922.

The legislators of another state with a large proportion of sheepmen in it thus joined those of Idaho in refusing to be stampeded into support of this unjustifiable and indefensible bill.

IN OHIO THE EFFORT FAILED ALSO.

In the legislature of Ohio the wool growers made a desperate effort to have enacted a bill unlike many others elsewhere supported. House Bill No. 242 was introduced by Mr. McClintock, referred to the House Judiciary Committee which recommended it for passage, and it was passed by the House, but not getting on the Senate calendar it failed of enactment. In the Senate, Bill No. 271, identical with House Bill 242 was introduced by Mr. Liggett and reported without recommendation by the Committee on Manufactures to which it was referred, but it was not passed by the Senate. The proponents of this legislation in Ohio were aided before the legislative committees by Mr. J. Byron Wilson, Vice-President and Secretary of the National Sheep and Wool Bureau, who, as the editor of the *American Sheep Breeder and Wool Grower*, stated in the issue for April, 1923, "did some fat work at the hearings."

It will be observed that the definition of "virgin wool" in the Ohio bill, as well as in the Wyoming law, is altogether different from that adopted in the French-Capper bill urged for enactment by Congress. The text of the bill is as follows: Providing that all cloth, fabric, garments or articles of apparel sold, displayed or offered for sale in this state which contain wool or purport to contain wool shall be labeled to show the wool content thereof.

Be it enacted by the General Assembly of the State of Ohio:

SECTION 1. Every person, firm or corporation selling or offering for sale in this state any cloth, fabric, garment or article of apparel containing wool, as herein defined, or purporting to contain wool, or displaying in this state any sample of cloth, fabric, garment, or articles of apparel containing wool or purporting to contain wool shall place thereon a conspicuous label in one of the three following forms:

1. All virgin wool.
2. Not less than per cent virgin wool.
3. No virgin wool.

Virgin wool as herein defined is wool which previous to its use in the labeled article never has formed any part of any cloth, fabric, garment or article of apparel. In the event that any article is labeled in the form indicated as number "2" above, the blank in such form shall be filled in with some percentage. Provided, however, that in labeling any garment or article of apparel which contains lining, facing or trimming, the label shall not be taken to refer to the lining, or facing, or trimming or the percentage or percentages of wool contained therein.

SECTION 2. Whoever violates any of the provisions of Section 1 of this act, or who shall by label state that the labeled article contains a greater percentage of virgin wool than it does contain shall be guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine of not less than twenty-five dollars nor more than five hundred dollars, or by imprisonment for not less than ten days nor more than sixty days, or by both such fine and imprisonment.

SECTION 3. Provided that such firm, person or corporation shall not be considered as having violated the above section if in purchasing said goods from a reputable manufacturing establishment he shall require such manufacturer upon shipping and delivering same to his place of business, to have stamped by having sewn on such garment or article of apparel or such sample displayed at a place where same would be easily discernible, a white cotton strip of cloth on which shall be indelibly printed or written the precise information con-

tained and required by Section 1 of this act. Provided, however, that nothing herein shall be construed as requiring a garment manufacturer to place any label or tag on the finished garment to designate the contents of the lining, interlinings, paddings, stiffenings, trimmings or facings of the garment, and provided that this act shall not be construed as requiring such finishings to be designated as to its fabric.

SOUTH DAKOTA'S BILL JUST ESCAPED ENACTMENT.

In South Dakota a bill No. 63, identical with the one offered in the legislature of Iowa, was introduced into the Senate by Mr Cock. The bill was passed by the House by one vote but was defeated in the Senate by a close vote.

TEXAS BILL PASSED BY THE LEGISLATURE VETOED BY GOVERNOR.

The Texas bill, for which the editor of the *Sheep and Goat Raisers Magazine* says the sheepmen of Texas have been hard at work for three years, is similar to those introduced into the Ohio legislature, except that an additional section, No. 4, was added. That embraced the emergency provision which, if the bill had been signed, made the law in force and effect from its passage.

The bill was unanimously endorsed by the Sheep and Goat Raisers Association of Texas, was introduced by Representative Walter K. Jones of Del Rio, a sheep and wool center, passed unanimously the House, and was sent to the Senate as House Bill No. 33 and referred to the Committee on Commerce and Manufactures, where it lay dormant until the arrival of the Association's Legislative Committee.

The following statement of the work done by the Legislative Committee of the Association to secure its enactment is made up from the Association's Magazine, whose editor is Captain James T. Elliott of San Angelo, Secretary and Treasurer of the Association. It should be authentic and certainly can not be considered as biased against the bill.

This Committee, composed of J. B. Murrah of San Antonio, Chairman; J. B. Moore of Del Rio; Louis A. Schreiner of Kerrville; R. E. Taylor of Carlsbad, New Mexico; V. A. Brown, Rock Springs, and James T. Elliott of San Angelo, reached Austin on the morning of February 14, accompanied

by President Claude A. Browne, and Judge George M. Thurmond, attorney for the Association.

Immediately appeals were made to the Senate Committee for a hearing. This was granted on the afternoon of February 15, after which the bill was unanimously reported favorably to the Senate and its passage requested.

Opposition developed from business men of Dallas, Fort Worth, Houston, and San Antonio, who demanded a hearing which was granted on the afternoon of February 20. A discussion lasting over three hours followed in which the measure was defended by Judge George M. Thurmond of Del Rio, attorney for the Association, and Captain James T. Elliott, of San Angelo, Secretary-Treasurer of the Association.

On the same afternoon Senator Stuart of Fort Worth moved to recommit the bill, but the motion was defeated by a vote of 19 to 5.

On February 22 the bill coming up in regular order on the Senate calendar was, on Senator Stuart's motion, postponed until March 1. Later the bill was passed after the following amendment was adopted to be added to the end of Section 3:

Also, provided that the bill shall not apply to merchandise already acquired at the time the Act takes effect; and provided, further, that this bill shall not apply to any wholesale or retail merchant or merchant tailor in Texas who has bona fide requested in writing any reputable woolen mill, manufacturer or wholesale merchant engaged in business beyond the limits of this State to comply with Section One of this Act, and such foreign woolen mill, manufacturer or wholesale merchant has positively refused to do so.

The bill was vetoed by Governor Neff who in his message said:

Without discussing the merits of the original purpose of this bill, the entire object of the bill was defeated by an amendment which provided that the bill should not apply to anyone who has made written request of the woolen mills or wholesale establishments to furnish this information if the said mills or wholesale establishments in writing declined to do so.

On account of this amendment which was placed on the bill, it is absolutely worthless for any purpose whatsoever. To pass it as it is now drawn would not require anyone to comply with the provision of the law and would cause, necessarily, endless and unnecessary confusion.

Before the veto of the Governor was known, the *Sheep and Goat Raisers Magazine* for March said: "Thus has culminated three years of hard work on the part of those who have sought to place upon the statute books of the State of Texas a Truth in Fabric law."

After the veto was written, the same magazine said in its April issue: "We must now concentrate our efforts for the passage of a Texas Truth in Fabric bill by the special session of the State Legislature, and steps are now being taken with this end in view."

UTAH'S ACT REGULATING ADVERTISING.

The legislature of Utah passed amendments to the state's laws regulating advertising. Its third section pertains to misrepresentation concerning merchandise or fabrics. The text of the bill is as follows:

An Act to amend Sections 8351 and 8352 of Chapter 50, Title 119, compiled laws of Utah, 1917, relating to Fraudulent Advertising.

Be it enacted by the Legislature of the State of Utah:

SECTION 1. That Sections 8351 and 8352 of Chapter 50, Title 119, Compiled Laws of Utah 1917, are hereby amended to read as follows:

8351. Every person, whether in his own behalf or as an officer of a corporation or as an agent, employee or representative of another person, firm or corporation who shall knowingly sell or in any way dispose of merchandise, service or anything offered by such person, firm or corporation directly or indirectly to the public for sale or distribution with intent to increase the consumption thereof or to induce the public in any manner to enter into any obligation relating thereto, or to acquire title thereto or interest therein, to make, publish, disseminate, circulate or place before the public, or cause directly or indirectly to be made, published, disseminated, circulated or placed before the public in this State in a newspaper, or publication, or in the form of a book, notice, handbill, bill, poster, circular, pamphlet or letter, or by oral proclamation or in any other way of advertisement of any sort regarding merchandise, service or anything so offered to the public, which advertisement contains any assertion, representation or statement which is false or untrue in any respect, or which is deceptive or misleading, or which is objectionable, as hereinafter defined, shall be guilty of a misdemeanor.

8352. 1. Within the meaning of Sections 8351-8353, an advertisement shall be defined to be any notice or announcement made by a handbill, placard, sign, newspaper, magazine, or other public print, or by an oral proclamation, of any article or thing, whether real or personal, for sale or exchange, or of any entertainment, exhibit, or amusement to which an admission fee is charged.

2. It shall be deemed deceptive and misleading advertising for any person, firm or corporation engaged in business in buying and selling new or second hand articles of goods, wares, or merchandise, or other property, real or personal, or who is engaged in the business of furnishing any kind of service, to advertise by means of "liner ads" in a newspaper, or otherwise, such articles, property or service for sale in a manner indicating that the sale is being made by a householder or private party not engaged in such business; and every person, firm or corporation engaged in any such business shall, in advertising such goods, wares, or merchandise, property or service for sale, either through "liner ads" or otherwise, affirmatively and clearly indicate that the seller is engaged in such business and is not a private party.

3. It shall be deemed deceptive and misleading advertising for any person, firm or corporation, in a newspaper or other publication, or in any manner hereinbefore set out, to offer to the public for sale or distribution any merchandise or fabric as all wool which is composed partly or entirely of cotton or other vegetable substitute for wool, or who shall advertise or sell any clothing or fabric as virgin wool, composed wholly or in part of reworked wool or shoddy or which is second hand or used merchandise, or which is defective in any manner, or which consists of articles or units or parts known as "seconds" or blemished merchandise, or which has been rejected by the manufacturer thereof as not first-class, unless there be conspicuously displayed in direct connection with the name or description of such merchandise and each specific article, unit or part thereof, an unequivocal statement, phrase or word which will clearly indicate that such merchandise or article, unit or part thereof so advertised is second hand, used, defective or consists of "seconds" or is blemished merchandise, or has been rejected by the manufacturer thereof as not first class, as the fact may be.

Signed March 9, 1923.

MR. HOLLY PRESENTS A SECOND BILL IN WISCONSIN.

Undaunted by the defeat of his bill in the 1921 session of the Wisconsin legislature, Mt. Holly introduced on January 23, 1923 a bill, No. 53A, to add a new section to the statutes

relating to labels on fabrics and articles of use and wearing apparel. Last year's bill covered shoes also, but his bill of 1923 contained no provision relating to them. Its text was as follows:

To create section 1670w of the statutes, relating to labels on fabric and articles of use and wearing apparel made therefrom and providing a penalty.

The people of the State of Wisconsin, represented in Senate and Assembly, do enact as follows:

SECTION 1. A new section is added to the statutes to read: Section 1670w. 1. No manufacturer, mail order house, agent, traveling salesman or peddler, shall sell or offer for sale to any person, group of persons, or to any retail dealer, any yarns, knit goods, or any woollen, cotton, linen or silk fabric, or any blankets, rugs, garments, clothing or any other articles of use or of wearing apparel, made from such yarns or fabrics, nor shall any retail dealer sell or offer for sale any such yarns, fabrics or articles hereafter purchased by him unless the principal part of each part of the same be plainly labeled in such a manner as the director of the division of markets shall designate, so as to show the character and amount of virgin wool, shoddy, cotton, silk or linen therein, number of threads each way to a square inch of such fabric, whether the same be in the bolt or in an article of use and the percentage by weight of each dry material therein. The name and address of the manufacturer of any such yarn, fabric, or article shall be indicated on such label. Such label, tag or stamp shall remain on such yarn, fabric or article until the same is sold to the consumer.

2. Any manufacturer, mail order house, agent, traveling salesman, peddler or retail dealer, violating any of the provisions of this section, shall, upon conviction, be punished by a fine not exceeding two hundred dollars or by imprisonment in the county jail not exceeding six months.

SECTION 2. This act shall take effect January 1, 1924.

The bill was referred to the Committee on Agriculture which, we are informed, recommended its indefinite postponement. The Assembly, however, passed it by a vote of 57 to 21.

In the Senate the Committee on Commerce recommended it for postponement and it was defeated by a vote of 18 to 10.

J. B. McP.

BOSTON PRICES FOR DOMESTIC WOOLS BY
MONTHS FOR EIGHTEEN YEARS.

COMPILED FROM THE QUARTERLY REPORTS OF THE
BOSTON MARKET PUBLISHED IN THIS BULLETIN.

DURING the past few years there have been wide fluctuations in the prices paid in this country for the various grades of domestic wool, as well as for foreign wools in the markets of the world. In view of the many discussions caused by these fluctuations, it has seemed fitting to compile and preserve in the pages of this Bulletin the prices quoted for grades of domestic wool in the Boston market as reported in our Quarterly Wool Reports, long recognized by experts and the courts as accurate and authoritative. These tables cover eighteen years by months, and we feel their accuracy can not be successfully questioned. The greatest care has been taken both by the compilers and the compositors to avoid mistakes. The tables appear on the pages which immediately follow.

J. B. McP.

DOMESTIC WOOL PRICES IN CENTS PER POUND.

| | Ohio, Penn. and West Virginia | | Mich., Wis. and New York | | Kentucky and Indiana | | Mo., Iowa and Ill. | | Texas | | California | | Territory Wool Mont., Wyo., Utah, Idaho, Ore. | | New Mexico | | Georgia and Southern | | | | | | | |
|-------|-------------------------------|-------|--------------------------|---------------|----------------------|---------------|--------------------|---------------|---------------|---------------------|-----------------------|-----------|---|------------------------------|---------------|-----------------------------|----------------------|----------------------|-----------------|--------------|--------------|--------------|--------------|----------|
| | Unwashed | | Unwashed | | Unwashed | | Unwashed | | Scoured Basis | | Scoured Basis | | Scoured Basis | | Scoured Basis | | Scoured Basis | | | | | | | |
| | Fine Delaine | Fine | ½ Blood | ¾ and ⅓ Blood | Fine Delaine | ¾ and ⅓ Blood | Braid | ¾ and ⅓ Blood | Braid | Spring Fine 12 mos. | Spring Medium 12 mos. | Fall Fine | Fall Medium | Spring Northern Free 12 mos. | Fall Free | Staple Fine and Fine Medium | Clothing Fine | Clothing Fine Medium | Clothing Medium | No. 1 Spring | No. 2 Spring | No. 3 Spring | No. 4 Spring | Unwashed |
| 1905 | | | | | | | | | | | | | | | | | | | | | | | | |
| Jan. | 27 | 21 | 30 | 31 | 25 | 32-33 | 29 | 30-32 | 28-29 | 65-67 | 39-60 | 35-56 | 52-53 | 63-65 | 54-55 | 68-70 | 64-65 | 50-61 | 58-60 | 61-63 | 56-57 | 50-51 | 44-45 | 30-31 |
| Feb. | 26-27 | 20-21 | 29 | 30 | 25 | 31-32 | 27 | 30 | 27 | 65-67 | 39-60 | 55-56 | 52-53 | 63-65 | 54-55 | 68-70 | 64-65 | 60-61 | 58-60 | 61-63 | 56-57 | 50-51 | 44-45 | 30 |
| Mar. | 26-27 | 20-21 | 28 | 29-30 | 25 | 30-31 | 27 | 29-30 | 27 | 63-65 | 57-58 | 55-56 | 52-53 | 63-65 | 54-55 | 67-68 | 64-65 | 60-61 | 57-58 | 61-63 | 56-57 | 50-51 | 43-44 | 30 |
| April | 23-24 | 29-30 | 30-31 | 29 | 25 | 30-31 | 27 | 29-30 | 27 | 67-68 | 58-60 | 55-56 | 52-53 | 63-65 | 54-55 | 68-70 | 64-66 | 61-62 | 57-58 | 62-64 | 57-58 | 51-52 | 44-45 | 30 |
| May | 26-27 | 33-34 | 34-35 | 30 | 27-28 | 35-36 | 29-30 | 33-34 | 28-29 | 70-72 | 60-62 | 56-58 | 54-55 | 68-70 | 57-58 | 70-73 | 68-70 | 67-68 | 61-63 | 65-67 | 58-60 | 52-53 | 45-46 | 32 |
| June | 29-30 | 24-25 | 32-33 | 34-35 | 27-28 | 36-37 | 31-32 | 34-35 | 29-30 | 72-74 | 64-66 | 63-62 | 57-58 | 70-73 | 58-59 | 72-74 | 70-73 | 68-70 | 62-65 | 68-70 | 62-63 | 53-55 | 45-47 | 32-33 |
| July | 30-31 | 25-26 | 33-34 | 34-35 | 27-28 | 36-37 | 31-32 | 35-36 | 30-31 | 74-76 | 68-70 | 62-63 | 60-61 | 73-75 | 62-63 | 72-75 | 72-73 | 68-70 | 65-67 | 68-70 | 62-63 | 52-55 | 44-45 | 34-35 |
| Aug. | 30-31 | 25-26 | 32-33 | 33-34 | 28-29 | 35-36 | 30-31 | 34-35 | 30-31 | 74-76 | 68-70 | 62-63 | 60-61 | 73-75 | 62-63 | 73-76 | 72-73 | 69-71 | 66-68 | 68-70 | 63-65 | 52-55 | 44-45 | 33-34 |
| Sept. | 30-31 | 25-26 | 32-33 | 33-34 | 28-29 | 35-36 | 30-31 | 34-35 | 30-31 | 74-76 | 68-70 | 62-63 | 60-61 | 73-75 | 62-63 | 73-76 | 72-73 | 70-72 | 66-70 | 68-70 | 64-67 | 53-56 | 44-45 | 33-34 |
| Oct. | 30 | 25 | 32-33 | 33-34 | 29 | 34-35 | 30 | 33-34 | 30 | 74-75 | 68-70 | 62-63 | 60-61 | 73-74 | 62-63 | 73-76 | 72-73 | 70-72 | 66-70 | 68-70 | 64-66 | 53-55 | 44-45 | 35-36 |
| Nov. | 30 | 25 | 32 | 33 | 28-29 | 34-35 | 30 | 33-34 | 30 | 74-75 | 66-68 | 61-62 | 59-60 | 73-74 | 61-62 | 73-75 | 71-72 | 70-71 | 65-67 | 67-69 | 63-65 | 52-54 | 43-44 | 35-36 |
| Dec. | 29 | 25 | 32 | 33 | 28-29 | 34-35 | 30 | 33-34 | 30 | 74-75 | 65-67 | 61-62 | 59-60 | 72-73 | 61-62 | 73-75 | 70-72 | 69-70 | 65-67 | 67-69 | 63-65 | 52-54 | 43-44 | 34-35 |

| | | | | | |
|-------|-------------------|-------------------------|-------------|-------------|---|
| 1900 | 26-27 33-34 33-34 | 28-29 24-25 31-32 31-32 | 27-28 33-34 | 28-29 31-32 | 27-28 73-74 64-66 62-63 59-60 71-72 61-62 73-75 70-72 63-69 64-66 67-69 63-65 52-54 43-44 32-33 |
| Jan. | 25-26 32-33 32-33 | 28-29 24-25 31-32 31-32 | 27-28 32-34 | 28-29 31-32 | 27-28 72-73 63-65 61-63 59-60 70-72 60-62 72-73 69-70 67-68 63-64 65-67 61-63 50-52 41-43 31-32 |
| Feb. | 25-26 32-33 32-33 | 28-29 24-25 31-32 31-32 | 27-28 32-34 | 28-29 31-32 | 27-28 72-73 63-65 61-63 59-60 70-72 60-62 72-73 69-70 67-68 63-64 65-67 61-63 50-52 41-43 30-32 |
| Mar. | 25-26 32-33 32-33 | 28-29 24-25 31-32 31-32 | 27-28 32-34 | 28-29 31-32 | 27-28 72-73 63-65 60-61 58-60 70-72 60-62 72-73 69-70 67-68 63-64 65-67 61-63 50-52 41-43 30-32 |
| Apr. | 25-26 32-33 32-34 | 28-29 24-25 31-32 31-33 | 26-27 32-34 | 28-29 31-32 | 27-28 72-73 63-65 60-61 58-60 70-72 60-62 72-73 69-70 67-68 63-64 65-67 61-63 50-52 41-43 30-31 |
| May | 25-26 32-33 32-34 | 28-29 24-25 31-32 31-33 | 26-27 32-34 | 28-29 31-32 | 27-28 72-73 63-65 60-61 58-60 70-72 60-62 72-73 69-70 67-68 63-64 65-67 61-63 50-52 41-43 30-31 |
| June | 25-26 32-33 32-34 | 28-29 24-25 31-32 31-33 | 26-27 32-34 | 28-29 31-32 | 27-28 72-73 63-65 60-61 58-60 70-72 60-62 72-73 69-70 67-68 63-64 65-67 61-63 50-52 41-43 29-30 |
| July | 26 32 32-32 | 28-29 24 31 31-32 | 26 32-33 | 28 31-32 | 28 72 63 None None 70-71 50-6 70-71 68-69 67-68 63-64 65-67 50-62 50-52 40-43 28-29 |
| Aug. | 26 32 32-32 | 28-29 24 31 31-32 | 26 31-32 | 28 30-31 | 27 70 62 None None 70 63 70 68 62 63-64 38-60 48-50 38-40 28 |
| Sept. | 25 32-33 32-33 | 28-29 24 31 32 31-32 | 26 31-32 | 27 30-31 | 27 70 62 None None 70 63 70 68 66-67 62 63-64 38-60 48-50 38-40 28 |
| Oct. | 25-26 33-34 32-34 | 28-29 24-25 32-33 31-33 | 26-27 32-34 | 27-28 30-32 | 27-28 70-72 62-63 57-58 52-55 68-69 59-60 69-72 67-68 66-67 62-63 65-67 58-60 48-50 41-42 28-29 |
| Nov. | 25-26 33-34 32-34 | 28-29 24-25 32-33 32-33 | 27-28 33-35 | 28-29 31-33 | 27-28 70-72 62-63 57-58 52-55 67-68 58-59 59-72 67-68 66-67 62-63 65-67 58-60 47-50 42-43 29-30 |
| Dec. | 25-26 33-34 33-35 | 29-30 24-25 32-33 32-34 | 27-28 33-35 | 28-29 32-34 | 28-29 70-72 62-63 57-58 52-55 67-68 58-59 59-72 67-68 56-67 62-63 65-67 58-60 47-50 42-43 30-31 |

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|-------|-------------------|-------------------------|-------------|-------------|---|
| 1907 | 25-26 33-34 33-34 | 30 24-25 32-33 32-34 | 27-28 33-35 | 28-29 32-33 | 27-28 70-72 62-63 57-58 52-55 67-68 56-57 69-71 37-65 66-67 60-62 65-67 57-59 47-50 40-42 30-31 |
| Jan. | 25-26 33-34 33-34 | 30 24-25 32-33 32-34 | 27-28 32-34 | 28-29 31-33 | 27-28 70-71 62-63 57-58 52-55 67-68 56-57 69-71 66-67 65-66 60-62 64-66 56-57 46-48 39-41 30-31 |
| Feb. | 25-26 33-34 33-34 | 30 24-25 32-33 32-34 | 27-28 32-34 | 28-29 31-33 | 27-28 69-70 62-63 57-58 52-55 67-68 56-57 69-71 66-67 65-66 60-62 63-65 56-57 45-47 38-40 30-31 |
| Mar. | 25-26 33-34 33-34 | 30 24-25 32-33 32-34 | 27-28 32-34 | 28-29 31-33 | 27-28 69-70 63-64 57-58 52-55 67-68 56-57 69-71 67-68 66-67 60-62 65-66 54-55 42-43 35-36 29 |
| Apr. | 25-26 33-34 32-33 | 29 24-25 32-33 31-33 | 28 32-33 | 28 31-32 | 27-28 70-71 63-64 57-58 52-55 67-68 57-58 69-71 67-68 67-68 60-62 65-66 54-55 42-43 35-36 29 |
| May | 25-26 33-34 31-33 | 29-30 24-25 32-33 31-33 | 28-29 31-33 | 28 30-31 | 27-28 71-72 63-64 57-58 52-55 62-63 69-71 68-69 67-68 60-62 65-66 54-55 42-43 35-36 29 |
| June | 26 33-34 31-32 | 30-31 25 33 30-33 | 28-29 30-33 | 28 30-31 | 27-28 71-72 63-64 57-58 52-55 62-63 69-71 68-69 67-68 60-62 65-66 54-55 42-43 35-36 29 |
| July | 26-27 33-34 31-33 | 30-31 25-26 33 30-33 | 29-30 30-33 | 27-28 29-31 | 27-28 71-72 63-64 None None 63 53 70-71 67-68 66-67 60-62 63-64 54-55 42-43 35-36 28 |
| Aug. | 26-27 33-34 31-34 | 31-32 25-26 33 30-33 | 29-30 30-33 | 27-28 29-31 | 27-28 71-72 63-64 None None 68 56 71-73 67-68 66-67 60-62 63-64 54-55 42-43 35-36 28 |
| Sept. | 26-27 33-34 31-34 | 31-32 25-26 33 30-33 | 29-30 30-33 | 27-28 29-31 | 27-28 71-72 63-64 None None 68 56 72-73 67-68 66-67 60-62 63-64 54-55 42-43 34-35 28 |
| Oct. | 26-27 33-34 31-34 | 31-32 25-26 33 30-33 | 29-30 30-33 | 27-28 29-31 | 27-28 71-72 63-64 53-55 48-50 68 56 72-73 67-68 66-67 60-62 63-64 54-55 42-43 34-35 28 |
| Nov. | 26-27 32-33 30-32 | 31-32 25-26 31-32 30-31 | 28-29 30-32 | 26-27 29-31 | 25-26 69-70 61-62 50-52 45-48 65-66 50-52 70-71 63-64 60-61 55-58 60-61 52-53 40-41 32-33 27 |
| Dec. | 25-26 31-32 29-31 | 31 25 31 29-30 | 28-29 29-31 | 25-26 28-30 | 24-25 67-68 58-59 48-50 43-45 64-65 48-50 68-70 60-61 57-58 52-55 58-60 50-52 38-40 30-32 26 |

DOMESTIC WOOL PRICES IN CENTS PER POUND—Continued.

| | Ohio, Penn. and West Virginia | | Mich., Wis. and New York | | Kentucky and Indiana | | Mo., Iowa and Ill. | | Texas | | California | | Territory Wool Mont., Wyo., Utah, Idaho, Ore. | | New Mexico | | Georgia and Southern | | | | | | | | | | | | | | |
|-------|-------------------------------|-------------|--------------------------|---------------|----------------------|---------------|--------------------|-------|---------------------|-----------------------|---------------|-------------|---|-----------|-----------------------------|---------------|----------------------|-----------------|--------------|--------------|--------------|--------------|----------|-------|-------|-------|-------|-------|-------|-------|----|
| | Unwashed | | Unwashed | | Unwashed | | Unwashed | | Scoured Basis | | Scoured Basis | | Scoured Basis | | Scoured Basis | | Scoured Basis | | | | | | | | | | | | | | |
| | Fine | 1 1/2 Blood | 3 3/8 Blood * | 1 1/2 Blood * | Fine Delaine | 3 3/8 Blood * | 1 1/2 Blood * | Braid | Spring Fine 12 mos. | Spring Medium 12 mos. | Fall Fine | Fall Medium | Spring Northern Free 12 mos. | Fall Free | Staple Fine and Fine Medium | Clothing Fine | Clothing Fine Medium | Clothing Medium | No. 1 Spring | No. 2 Spring | No. 3 Spring | No. 4 Spring | Unwashed | | | | | | | | |
| 1908 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Jan. | 25-26 | 31-32 | 31 | 29 | 30-31 | 24-25 | 30-31 | 30 | 28 | 28-29 | 30 | 28 | 23-24 | 29 | 27 | 22-23 | 66-67 | 58-59 | 47-48 | 42-43 | 63-64 | 46-47 | 67-68 | 38-60 | 55-57 | 50-52 | 56-58 | 48-50 | 36-38 | 28-30 | 25 |
| Feb. | 25-26 | 31-32 | 31 | 28 | 30 | 23-24 | 29-30 | 30 | 27 | 28 | 30 | 28 | 22-23 | 29 | 26 | 21-22 | 63-64 | 53-54 | 43-45 | 38-40 | 61-62 | 41-42 | 65-66 | 55-57 | 52-55 | 47-50 | 53-55 | 45-47 | 31-33 | 25-27 | 23 |
| Mar. | 24-25 | 30-31 | 30 | 26 | 29 | 23-24 | 29-30 | 29 | 25 | 27 | 30 | 26 | 21-22 | 28 | 25 | 20-21 | 61-62 | 50-51 | 42-43 | 35-38 | 58-60 | 38-40 | 64-65 | 52-53 | 50-51 | 45-47 | 51-53 | 41-43 | 28-30 | 22-24 | 22 |
| Apr. | 22 | 28-29 | 28-29 | 26 | 28 | 22 | 28 | 27 | 25 | 26 | 29 | 26 | 20 | 27 | 25 | 19 | 60-61 | 48-50 | 40-42 | 35-37 | 56-57 | 35-37 | 60-63 | 50-52 | 48-50 | 43-45 | 50-52 | 40-42 | 27-28 | 22-23 | 21 |
| May | 20 | 24-25 | 24-25 | 22-23 | 24-25 | 18 | 23-24 | 23-24 | 21-22 | 23-24 | 24 | 21-22 | 18-19 | 22-23 | 20-21 | 17-18 | 53-54 | 43-45 | 38-40 | 33-35 | 50-52 | 33-35 | 53-55 | 45-47 | 43-45 | 40-43 | 47-48 | 38-40 | 25-27 | 20-22 | 20 |
| June | 20-21 | 25-26 | 25-26 | 23-24 | 24-25 | 18-19 | 24-25 | 23-24 | 22-23 | 23-24 | 24-25 | 22-23 | 18-19 | 23-24 | 21-22 | 17-18 | 50-52 | 43-45 | 40-41 | 35-36 | 48-50 | 33-35 | 55-57 | 48-50 | 45-46 | 42-43 | 48-50 | 40-41 | 26-28 | 22-23 | 21 |
| July | 21 | 26 | 25 | 24 | 26 | 20 | 25 | 24 | 23 | 25 | 25 | 24 | 20 | 23 | 22 | 20 | 53 | 46 | 42 | 40 | 46 | 32 | 56 | 48 | 46 | 42 | 48 | 40 | 26 | 23 | 22 |
| Aug. | 22 | 26 | 25 | 25 | 27 | 21 | 25 | 24 | 23 | 26 | 25 | 24 | 20 | 23 | 22 | 20 | 53 | 46 | 42 | 40 | 46 | 32 | 57 | 43 | 46 | 42 | 48 | 40 | 26 | 23 | 23 |
| Sept. | 22 | 26 | 26 | 25 | 27 | 21 | 25 | 24 | 23 | 26 | 25 | 24 | 20 | 24 | 23 | 20 | 53 | 46 | 42 | 40 | 47 | 33 | 57 | 48 | 46 | 42 | 49 | 41 | 28 | 25 | 23 |
| Oct. | 22 | 26 | 26 | 25 | 27 | 21 | 25 | 24 | 23 | 26 | 26 | 25 | 21 | 24 | 23 | 21 | 53 | 48 | 42 | 40 | 47 | 35 | 58 | 48 | 46 | 44 | 49 | 41 | 28 | 25 | 24 |
| Nov. | 22 | 27 | 27 | 26 | 28 | 21 | 26 | 25 | 24 | 27 | 27 | 26 | 22 | 25 | 24 | 22 | 56 | 50 | 45 | 41 | 50 | 38 | 63 | 52 | 49 | 47 | 52 | 43 | 32 | 28 | 25 |
| Dec. | 23 | 29 | 28 | 27 | 30 | 22 | 28 | 27 | 26 | 28 | 28 | 27 | 23 | 26 | 25 | 23 | 60 | 53 | 47 | 42 | 55 | 42 | 62 | 57 | 52 | 50 | 55 | 45 | 35 | 32 | 27 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1909 | 24 | 30 | 29 | 29 | 30 | 22 | 29 | 28 | 23 | 28 | 28-29 | 28 | 24 | 27-28 | 26-27 | 23 | 62 | 53 | 48 | 43 | 55 | 42-43 | 63 | 58 | 55 | 52 | 56 | 46 | 37 | 34 | 27 |
| Jan. | 24 | 30 | 29 | 29 | 30 | 22 | 29 | 28 | 23 | 28 | 28-29 | 28 | 24 | 27-28 | 26-27 | 23 | 62 | 53 | 48 | 43 | 55 | 42-43 | 63 | 58 | 55 | 52 | 56 | 46 | 37 | 34 | 27 |
| Feb. | 25 | 31 | 30 | 30 | 30 | 23 | 30 | 29 | 29 | 29 | 30 | 29 | 25 | 28 | 28 | 24 | 63 | 55 | 49 | 44 | 55 | 43 | 64 | 59 | 56 | 53 | 57 | 47 | 38 | 35 | 28 |
| Mar. | 25-26 | 31-32 | 30-31 | 30 | 31 | 23-24 | 30-31 | 29-30 | 29-30 | 30 | 30-31 | 29-30 | 26 | 28-29 | 28-29 | 24-25 | 63-65 | 55 | 49 | 45 | 55 | 42-44 | 64-65 | 59-60 | 56-57 | 53-55 | 57-58 | 48-49 | 38-40 | 35-37 | 28 |
| Apr. | 25-26 | 32-33 | 32-33 | 30-31 | 31 | 23-24 | 31-32 | 31-32 | 29-30 | 30 | 32-33 | 31-32 | 26 | 29 | 28-29 | 25 | 63-65 | 56 | 50 | 47 | 60-61 | 45-46 | 64-66 | 60-61 | 57-58 | 54-55 | 58-60 | 49-50 | 39-40 | 36-38 | 28 |
| May | 25-26 | 33-34 | 33-34 | 31-32 | 32 | 23-24 | 32-33 | 32-33 | 30-32 | 31 | 33-34 | 32-33 | 26-27 | 30-32 | 30-31 | 25 | 63-65 | 56 | 50-52 | 48 | 60-61 | 46-47 | 66-67 | 61-62 | 58-60 | 56-57 | 60 | 49-50 | 39-40 | 36-38 | 28-29 |
| June | 26-27 | 35-36 | 34-35 | 33-34 | 33 | 25-26 | 33-34 | 33-34 | 32-33 | 32 | 34-35 | 33-34 | 28-29 | 32-33 | 31-32 | None | 66-68 | 58-60 | 53-55 | 50-52 | 63-65 | 30-52 | 69-72 | 65-67 | 62-63 | 60-61 | 62-63 | 52-53 | 42-43 | 39-41 | 30 |
| July | 27-28 | 36-37 | 36 | 34-35 | 33 | 26-2 | 35-36 | 35 | 33-34 | 32-33 | 35-36 | 34-35 | 28-29 | 33-34 | 31-32 | 28-29 | 70-72 | 62-63 | 57-58 | 52-53 | 65-67 | 72-75 | 68-70 | 65-67 | 63-65 | 65-67 | 55-57 | 45-47 | 41-43 | 32 | |
| Aug. | 27-28 | 36-37 | 36 | 34-35 | 33 | 26-27 | 35-36 | 35 | 33-34 | 32-33 | 36-37 | 34-35 | 29-30 | 33-34 | 31-32 | 29-30 | 75-77 | 65-66 | 58-60 | 53-55 | 68-70 | 72-75 | 75-78 | 70-72 | 67-70 | 65-67 | 67-70 | 57-60 | 47-50 | 43-45 | 32-33 |
| Sept. | 27-28 | 36-37 | 36-37 | 34-36 | 33 | 26-27 | 35-36 | 35-36 | 34 | 32-33 | 36-37 | 34-35 | 30 | 33-34 | 32-33 | 30 | 76-78 | 65-67 | 60-61 | 53-55 | 68-70 | 73-55 | 75-78 | 70-72 | 67-70 | 65-67 | 67-70 | 57-60 | 47-50 | 43-45 | 32-33 |
| Oct. | 27-28 | 36-37 | 36-37 | 34-35 | 33-34 | None | 26-27 | 35-36 | 34-35 | 32 | 36-37 | 34-35 | 29-30 | 33-34 | 32-33 | 28-29 | 74-75 | 66-67 | 61-62 | 53-55 | 68-70 | 57 | 75-78 | 70-71 | 67-68 | 65-66 | 67-69 | 57-60 | 47-50 | 43-45 | 32-33 |
| Nov. | 27-28 | 36-37 | 36-37 | 34-35 | 32-33 | None | 26-27 | 35-36 | 34-35 | 31 | 36-37 | 34-35 | 29-30 | 33-34 | 32-33 | 28-29 | 74-75 | 66-67 | 61-62 | 53-55 | 68-69 | 56-57 | 75-77 | 70-71 | 67-68 | 65-66 | 67-69 | 57-60 | 47-50 | 43-45 | 32-33 |
| Dec. | 27-28 | 36-37 | 36-37 | 34-35 | 31-32 | None | 26-27 | 35-36 | 34-35 | 30 | 36-37 | 34-35 | 29-30 | 33-34 | 32-33 | 28-29 | 74-75 | 66-67 | 61-62 | 53-55 | 67-69 | 55-57 | 74-76 | 68-70 | 66-67 | 64-66 | 66-68 | 57-58 | 47-50 | 43-45 | 32-33 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1910 | 27-28 | 36-37 | 36-37 | 34-35 | 31-32 | 26-27 | 35-36 | 34-35 | 33-34 | 30-31 | 36-37 | 34-35 | 29-30 | 33-34 | 32-33 | 28-29 | 72-73 | 66-67 | 61-62 | 53-55 | 66-68 | 53-55 | 73-74 | 68-69 | 66-67 | 63-65 | 66-68 | 57-58 | 46-48 | 43-45 | 30-31 |
| Jan. | 27-28 | 36-37 | 36-37 | 34-35 | 31-32 | 25-26 | 35-36 | 34-35 | 33-34 | 30-31 | 36-37 | 34-35 | None | 33-34 | 32-33 | 28-29 | 72-73 | 66-67 | 61-62 | 53-55 | 66-68 | 53-55 | 72-73 | 67-68 | 65-66 | 62-64 | 66-67 | 56-57 | 45-47 | 42-44 | 30-31 |
| Feb. | 27-28 | 36-37 | 36-37 | 34-35 | 31-32 | 25-26 | 35-36 | 34-35 | 33-34 | 30-31 | 36-37 | 34-35 | None | 33-34 | 32-33 | 28-29 | 72-73 | 66-67 | 61-62 | 53-55 | 66-68 | 53-55 | 72-73 | 67-68 | 65-66 | 62-64 | 66-67 | 56-57 | 45-47 | 42-44 | 30-31 |
| Mar. | 26-27 | 35-36 | 35-36 | 33-34 | 29-30 | 24-25 | 34-35 | 33-34 | 32-33 | 28-29 | 35-36 | 33-34 | None | 32-33 | 31-32 | 27-28 | 70-71 | 64-65 | 59-60 | 52-53 | 64-66 | 51-53 | 70-71 | 65-66 | 63-64 | 60 | 62 | 65-66 | 55-57 | 43-45 | 38-40 |
| Apr. | 24-25 | 33-34 | 33-34 | 31-32 | 26-27 | 22-23 | 32-33 | 32-33 | 30-31 | 25-26 | 32-33 | 30-31 | 24-25 | 30-31 | 29-30 | 23-24 | 67-68 | 62-63 | 57-58 | 50-52 | 62-64 | 49-51 | 67-68 | 62-63 | 60-61 | 57-59 | 62-63 | 53-55 | 42-43 | 36-38 | 26-28 |
| May | 23-24 | 31-32 | 30-31 | 29-30 | 25-26 | 21-22 | 29-30 | 29-30 | 28-29 | 24-25 | 30-31 | 27-28 | 22-23 | 28-29 | 26-27 | 21-22 | 62-63 | 57-58 | 52-53 | 45-47 | 56-57 | 45-47 | 62-63 | 57-58 | 55-56 | 52-53 | 56-57 | 47-48 | 38-39 | 35-36 | 24-25 |
| June | 21-22 | 28-29 | 27-28 | 26-27 | 24-25 | 20-21 | 27-28 | 27-28 | 25-26 | 23-24 | 28-29 | 26-27 | 22-23 | 26-28 | 24-25 | 20-21 | 60-62 | 53-55 | 48-50 | 43-45 | 54-56 | 44-45 | 60-61 | 56-57 | 54-55 | 50-51 | 54-55 | 45-47 | 36-37 | 34-35 | 24-25 |
| July | 21-22 | 28-29 | 27-28 | 26-27 | 25-26 | 20-21 | 27-28 | 27-28 | 25-26 | 23-24 | 28-29 | 26-27 | 22-23 | 26-28 | 24-25 | 20-21 | 60-62 | 53-55 | 48-50 | 43-45 | 54-56 | 44-45 | 60-61 | 56-57 | 54-55 | 50-51 | 55-56 | 45-47 | 36-37 | 34-35 | 24-25 |
| Aug. | 20-21 | 28-29 | 27-28 | 26-27 | 25-26 | 19-20 | 27-28 | 27-28 | 25-26 | 24-25 | 28-29 | 27-28 | 22-23 | 26-28 | 24-25 | 21-22 | 59-60 | 52-54 | 48-50 | 42-43 | 54-56 | 44-45 | 61-62 | 56-57 | 54-55 | 50-51 | 55-56 | 45-47 | 36-37 | 34-35 | 24-25 |
| Sept. | 20-21 | 28-29 | 27-28 | 26-27 | 25-26 | 19-20 | 27-28 | 27-28 | 25-26 | 24-25 | 28-29 | 27-28 | 22-23 | 26-28 | 24-25 | 21-22 | 60-61 | 52-54 | 48-50 | 42-43 | 54-56 | 44-45 | 61-62 | 56-57 | 54-55 | 50-51 | 55-57 | 46-47 | 36-37 | 34-35 | 24-25 |
| Oct. | 22-23 | 28-29 | 28-29 | 27-28 | 26-27 | 20-21 | 27-28 | 27-28 | 26-27 | 25-26 | 28-29 | 27-28 | 22-23 | 27-28 | 25-26 | 22-23 | 58-60 | 52-54 | 48-50 | 42-43 | 55-56 | 44-45 | 62-63 | 56-57 | 55-56 | 50-51 | 55-57 | 46-47 | 36-37 | 34-35 | 24-25 |
| Nov. | 22-23 | 28-29 | 28-29 | 27-28 | 26-27 | 20-21 | 27-28 | 27-28 | 26-27 | 25-26 | 28-29 | 27-28 | 22-23 | 27-28 | 25-26 | 22-23 | 58-60 | 52-54 | 48-50 | 42-43 | 55-56 | 44-45 | 62-63 | 56-57 | 55-56 | 50-51 | 55-57 | 46-47 | 36-37 | 34-35 | 24-25 |
| Dec. | 22-23 | 29-30 | 28-29 | 27-28 | 26-27 | 20-21 | 27-28 | 27-28 | 26-27 | 25-26 | 28-29 | 27-28 | 22-23 | 27-28 | 25-26 | 22-23 | 58-60 | 52-54 | 48-50 | 42-43 | 55-56 | 44-45 | 62-63 | 56-57 | 55-56 | 50-51 | 55-57 | 46-47 | 36-37 | 34-35 | 24-25 |

* 3/8 and 1/2, Blood given separately for first time in 1908.

DOMESTIC WOOL PRICES IN CENTS PER POUND—Continued.

| | Ohio, Penn. and West Virginia | | | Mich., Wis. and New York | | | Kentucky and Indiana | | Mo., Iowa and Ill. | | Texas | | California | | Territory Wool Mont., Wyo., Utah, Idaho, Ore. | | Georgia and Southern | | | | | | | | | | | | | |
|----------------|-------------------------------|----------------------|----------------------|--------------------------|----------------------|----------------------|----------------------|----------------------|--------------------|----------------------|----------------------|----------------------|---------------|---------------------------|---|-----------------------------|----------------------|--|--------------|--------------|--------------|--------------|----------|-------|-------|-------|-------|-------|-------|-------|
| | Unwashed | | | Unwashed | | | Unwashed | | Unwashed | | Scoured Basis | | Scoured Basis | | Scoured Basis | | Scoured Basis | | | | | | | | | | | | | |
| | Fine | 1 ² Blood | 3 ⁴ Blood | 1 ⁴ Blood | 3 ⁴ Blood | 1 ² Blood | 3 ⁴ Blood | 1 ⁴ Blood | Braid | 1 ² Blood | 3 ⁴ Blood | 1 ⁴ Blood | Braid | Free 12 mos. [†] | Fall Free | Staple Fine and Fine Medium | Clothing Medium | Clothing Fine and Fine Medium [‡] | No. 1 Spring | No. 2 Spring | No. 3 Spring | No. 4 Spring | Unwashed | | | | | | | |
| 1911 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Jan. | 22-23 | 29-30 | 28-29 | 27-28 | 26-27 | 20-21 | 28-29 | 27-28 | 22-23 | 25-26 | 28-29 | 27-28 | 22-23 | 27-28 | 25-26 | 22-23 | 57-59 | 52-53 | 47-48 | 42-43 | 54-55 | 43-44 | 60-62 | 50-52 | 55-56 | 54-56 | 45-47 | 35-37 | 34-35 | 23-24 |
| Feb. | 21-22 | 28-29 | 27-28 | 26-27 | 25-26 | 20-21 | 27-28 | 26-27 | 22-23 | 24-25 | 27-28 | 26-27 | 22-23 | 26-27 | 24-25 | 21-22 | 55-57 | 50-51 | 45-46 | 41-42 | 53-54 | 42-43 | 58-60 | 48-50 | 53-54 | 53-54 | 44-45 | 35-36 | 33-34 | 22-23 |
| Mar. | 20-21 | 27-28 | 26-27 | 25-26 | 24-25 | 19-20 | 26-27 | 25-26 | 21-22 | 23-24 | 26-27 | 25-26 | 21-22 | 25-26 | 23-24 | 20-21 | 50-52 | 48-49 | 44-45 | 40-41 | 50-52 | 40-42 | 53-55 | 43-45 | 48-50 | 50-51 | 43-44 | 34-35 | 32-33 | 22-23 |
| Apr. | 19-20 | 26-27 | 25-26 | 24-25 | 23-24 | 18-19 | 25-26 | 24-25 | 23-24 | 25-26 | 23-24 | 21-22 | 23-24 | 23-24 | 20-21 | 47-48 | 44-45 | 40-41 | 38-40 | 47-48 | 38-40 | 52-53 | 41-43 | 45-47 | 47-48 | 42-43 | 33-34 | 30-32 | 21-22 | |
| May | 18-19 | 24-25 | 23-24 | 22-23 | 22-23 | 17-18 | 23-24 | 23-24 | 22-23 | 23-24 | 22-23 | 23-24 | 22-23 | 20-21 | 19-20 | 45-47 | 42-43 | 38-40 | 36-38 | 46-47 | 37-38 | 51-52 | 40-42 | 45-46 | 45-47 | 41-42 | 32-33 | 30-32 | 20-21 | |
| June | 18-19 | 24-25 | 23-24 | 22-23 | 22-23 | 17-18 | 23-24 | 23-24 | 22-23 | 23-24 | 22-23 | 23-24 | 22-23 | 20-21 | 19-20 | 45-47 | 42-43 | 38-40 | 36-38 | 45-47 | 37-38 | 51-52 | 40-42 | 45-46 | 45-47 | 41-42 | 31-33 | 30-32 | 20-21 | |
| July | 19-20 | 24-25 | 24-25 | 23-24 | 23-24 | 18-19 | 23-24 | 23-24 | 22-23 | 23-24 | 22-23 | 23-24 | 22-23 | 20-21 | 19-20 | 50-52 | 43-44 | 38-40 | 36-38 | 48-50 | 37-38 | 54-56 | 40-42 | 47-49 | 45-47 | 41-42 | 32-35 | 30-32 | 20-21 | |
| Aug. | 19-20 | 24-25 | 24-25 | 23-24 | 23-24 | 18-19 | 23-24 | 23-24 | 22-23 | 23-24 | 22-23 | 23-24 | 22-23 | 20-21 | 19-20 | 50-52 | 43-44 | 38-40 | 36-38 | 48-50 | 37-38 | 55-56 | 40-42 | 48-50 | 46-48 | 42-43 | 33-36 | 30-32 | 21-22 | |
| Sept. | 20-21 | 25-26 | 24-25 | 24-25 | 24-25 | 19-20 | 24-25 | 24-25 | 23-24 | 24-25 | 23-24 | 22-23 | 23-24 | 23-24 | 21-22 | 52-53 | 45-46 | 39-42 | 37-39 | 48-50 | 37-38 | 58-60 | 42-45 | 50-53 | 47-48 | 42-43 | 33-36 | 31-33 | 21-22 | |
| Oct. | 20-21 | 25-26 | 24-25 | 24-25 | 20-21 | 24-25 | 24-25 | 23-24 | 23-24 | 24-25 | 24-25 | 22-23 | 23-24 | 23-24 | 21-22 | 52-53 | 46-47 | 40-42 | 37-39 | 48-50 | 38-40 | 59-61 | 44-47 | 50-53 | 47-48 | 42-43 | 33-36 | 31-33 | 22-23 | |
| Nov. | 21-22 | 25-26 | 25-26 | 24-25 | 20-21 | 25-26 | 25-26 | 24-25 | 23-24 | 24-25 | 24-25 | 22-23 | 24-25 | 23-24 | 22-23 | 52-53 | 46-47 | 40-42 | 38-40 | 48-50 | 38-40 | 60-62 | 45-47 | 50-53 | 47-48 | 42-43 | 33-36 | 31-33 | 22-23 | |
| Dec. | 21-22 | 26-27 | 25-26 | 25-26 | 21-22 | 25-26 | 25-26 | 24-25 | 24-25 | 25-26 | 25-26 | 22-23 | 24-25 | 24-25 | 22-23 | 53-55 | 47-48 | 41-43 | 39-41 | 48-50 | 38-40 | 60-62 | 47-48 | 51-54 | 48-50 | 43-44 | 35-37 | 32-34 | 23-24 | |

DOMESTIC WOOL PRICES IN CENTS PER POUND—Continued.

| | Ohio, Penn. and West Virginia | | | | Mich., Wis. and New York | | | | Kentucky and Indiana | | Mo., Iowa and Ill. | | Texas | | California | | Territory Wool Mont., Wyo., Utah, Idaho, Ore. | | New Mexico | | Georgia and Southern | | | | | | | | |
|----------------|-------------------------------|----------------------|----------------------|--------------|--------------------------|----------------------|----------------------|-------|----------------------|----------------------|----------------------|-------|-----------------------|----------------|----------------|--------------------|---|--------------|---------------|----------------------|----------------------|------------------------|--------------|--------------|--------------|--------------|----------|-------|-------|
| | Unwashed | | | | Unwashed | | | | Unwashed | | Unwashed | | Scoured Basis | | Scoured Basis | | Scoured Basis | | Scoured Basis | | Scoured Basis | | | | | | | | |
| | 1 ² Blood | 3 ² Blood | 1 ⁴ Blood | Fine Delaine | 1 ² Blood | 3 ² Blood | 1 ⁴ Blood | Braid | 1 ² Blood | 3 ² Blood | 1 ⁴ Blood | Braid | 12 mos. Fine and Time | 12 mos. Medium | 12 mos. Medium | Fall Fine and Fine | Fall Medium | Free 12 mos. | Fall Free | Staple Fine and Fine | Clothing Medium | Clothing Fine and Fine | No. 1 Spring | No. 2 Spring | No. 3 Spring | No. 4 Spring | Unwashed | | |
| 1914 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Jan. | 20-21 | 22-23 | 22-23 | 22-23 | 19-20 | 21-22 | 21-22 | 21-22 | 21-22 | 21-22 | 21-22 | 21-22 | 22-23 | 22-23 | 22-23 | 22-23 | 22-23 | 22-23 | 22-23 | 22-23 | 22-23 | 22-23 | 22-23 | 22-23 | 22-23 | 22-23 | 22-23 | 22-23 | |
| Feb. | 21-22 | 22-23 | 22-23 | 23-24 | 19-20 | 21-23 | 21-22 | 22-23 | 23-24 | 23-24 | 23-24 | 20-21 | 22-23 | 22-23 | 22-23 | 22-23 | 22-23 | 22-23 | 22-23 | 22-23 | 22-23 | 22-23 | 22-23 | 22-23 | 22-23 | 22-23 | 22-23 | 22-23 | |
| Mar. | 21-22 | 23-24 | 23-24 | 22-23 | 20-21 | 22-23 | 22-23 | 22-23 | 23-24 | 23-24 | 23-24 | 20-21 | 22-23 | 22-23 | 22-23 | 22-23 | 22-23 | 22-23 | 22-23 | 22-23 | 22-23 | 22-23 | 22-23 | 22-23 | 22-23 | 22-23 | 22-23 | 22-23 | |
| Apr. | 22-23 | 24-25 | 24-25 | 23-24 | 21-22 | 23-24 | 22-23 | 22-23 | 24-25 | 24-25 | 24-25 | 20-21 | 22-23 | 22-23 | 22-23 | 22-23 | 22-23 | 22-23 | 22-23 | 22-23 | 22-23 | 22-23 | 22-23 | 22-23 | 22-23 | 22-23 | 22-23 | 22-23 | |
| May | 22-23 | 25-26 | 25-26 | 24-25 | 21-22 | 25-27 | 25-27 | 24-25 | 23-24 | 26-27 | 26-27 | 21-22 | 25-26 | 25-26 | 21-22 | 58-60 | 50-52 | 46-48 | 42-43 | 52-54 | 45-47 | 59-60 | 47-49 | 54-55 | 55-56 | 47-48 | 42-43 | 23-24 | |
| June | 23-24 | 26-27 | 25-26 | 26-27 | 22-23 | 26-27 | 26-27 | 24-25 | 23-24 | 26-27 | 26-27 | 21-22 | 25-26 | 25-26 | 21-22 | 58-60 | 50-52 | 46-48 | 42-43 | 52-54 | 45-46 | 59-62 | 48-50 | 54-56 | 56-57 | 47-48 | 40-41 | 23-24 | |
| July | 24-25 | 27-28 | 27-28 | 27-28 | 23-24 | 26-27 | 26-27 | 24-25 | 27-28 | 26-27 | 26-27 | 22-23 | 26-27 | 25-26 | 21-22 | 60-61 | 52-53 | 47-48 | 42-43 | 53-55 | 46-47 | 60-62 | 50-52 | 55-57 | 57-58 | 48-50 | 40-42 | 24-25 | |
| Aug. | 24-25 | 28-29 | 27-28 | 26-27 | 27-28 | 27-28 | 27-28 | 26-27 | 25-26 | 27-28 | 26-27 | 22-23 | 26-27 | 25-26 | 21-22 | 60-62 | 53-54 | 48-50 | 43-44 | 56-57 | 47-48 | 62-63 | 51-53 | 56-58 | 57-58 | 48-50 | 40-42 | 24-25 | |
| Sept. | 24-25 | 27-28 | 26-27 | 26-27 | 26-27 | 26-27 | 25-26 | 24-25 | 27-28 | 25-26 | 22-23 | 25-26 | 22-23 | 25-26 | 21-22 | 58-60 | 51-52 | 46-48 | 42-43 | 54-55 | 45-46 | 60-62 | 50-52 | 54-56 | 55-56 | 46-48 | 38-40 | 35-37 | 24-25 |
| Oct. | 23-24 | 27-28 | 26-27 | 24-25 | 22-23 | 26-27 | 25-26 | 23-24 | 27-28 | 25-26 | 22-23 | 25-26 | 25-26 | 21-22 | 56-58 | 51-52 | 45-47 | 42-43 | 53-54 | 45-46 | 58-60 | 50-52 | 54-55 | 54-55 | 46-48 | 38-40 | 35-37 | 24-25 | |
| Nov. | 23-24 | 28-29 | 28-29 | 25-26 | 22-23 | 27-28 | 27-28 | 27-28 | 24-25 | 28-29 | 27-28 | 24-25 | 27-28 | 26-27 | 23-24 | 57-58 | 52-53 | 45-47 | 43-45 | 54-55 | 46-48 | 60-62 | 52-53 | 56-57 | 57-58 | 48-50 | 40-42 | 37-39 | 24-25 |
| Dec. | 23-24 | 29-30 | 29-30 | 25-26 | 22-23 | 28-29 | 28-29 | 28-29 | 24-25 | 29-30 | 28-29 | 25-26 | 27-28 | 24-25 | 57-58 | 53-54 | 45-47 | 43-45 | 54-55 | 46-48 | 60-62 | 53-54 | 56-57 | 57-58 | 50-52 | 43-45 | 40-42 | 34-35 | 24-25 |

*Dropped at the end of 1914.

| Ohio, Penn. and West Virginia | | Mich., Wis. and New York | | Kentucky and Indiana | | Mo., Iowa and Ill. | | Texas | | California | | Territory Wool Mont., Wyo., Utah, Idaho, Ore. | | | | New Mexico | | | | Georgia and Southern | | | | | | | | | | |
|-------------------------------|------------|--------------------------|------------|----------------------|-----------|--------------------|-----------|-----------------------|----------------------|--------------------|---------------|---|------------|----------------------|--------------------------|---------------|------------|------------|---------|----------------------|---------|---------|---------|---------|-------|-------|-------|-------|-------|-------|
| Unwashed | | Unwashed | | Unwashed | | Unwashed | | Scoured Basis | | Scoured Basis | | Scoured Basis | | | | Scoured Basis | | | | | | | | | | | | | | |
| Fine | 1/2 Blood* | 1/4 Blood | 3/4 Blood* | 1/4 Blood | 3/4 Blood | 1/4 Blood | 3/4 Blood | 12 mos. Fine and Fine | Spring Fine and Fine | Fall Fine and Fine | 12 mos. Fine† | Spring Fine† | Fall Fine† | Staple Fine and Fine | Clothing Fine and Medium | 1/2 Blood‡ | 3/4 Blood‡ | 1/4 Blood‡ | No. 1/8 | | No. 1/4 | No. 1/2 | No. 3/8 | No. 1/2 | | | | | | |
| 1915 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Jan. | 24-25 | 30-31 | 30-31 | 30-31 | 26-27 | 23-24 | 29-30 | 29-30 | 29-30 | 29-30 | 29-30 | 29-30 | 29-30 | 29-30 | 24-25 | 38-60 | 55-57 | 48-50 | 55-57 | 54-56 | 48-50 | 62-64 | 57-59 | 57-59 | 55-57 | 53-55 | 58-60 | 56-58 | 52-54 | 25-26 |
| Feb. | 28-29 | 34-35 | 36-37 | 36-37 | 30-31 | 26-27 | 32-33 | 34-35 | 34-35 | 28-29 | 35-36 | 35-36 | 30-31 | 34-35 | 29-30 | 70-72 | 63-65 | 58-60 | 67-68 | 60-62 | 58-60 | 72-74 | 68-70 | 68-70 | 65-67 | 60-62 | 68-70 | 65-67 | 60-62 | 32-34 |
| Mar. | 28-29 | 36-37 | 37-38 | 37-38 | 32-33 | 26-27 | 34-35 | 36-37 | 36-37 | 30-31 | 37-38 | 37-38 | 31-32 | 35-36 | 30-31 | 70-72 | 63-65 | 58-60 | 67-68 | 60-62 | 58-60 | 72-74 | 68-70 | 68-70 | 65-67 | 60-62 | 68-70 | 65-67 | 60-62 | 32-34 |
| Apr. | 25-26 | 33-34 | 34-36 | 34-36 | 29-30 | 23-24 | 31-32 | 32-33 | 32-33 | 27-28 | 34-35 | 35-36 | 30-32 | 32-33 | 30-31 | 68-70 | 60-62 | 56-58 | 65-67 | 58-60 | 56-58 | 70-72 | 66-68 | 66-68 | 64-66 | 60-62 | 64-66 | 60-62 | 55-57 | 31-33 |
| May | 25-26 | 33-34 | 34-36 | 34-36 | 29-30 | 23-24 | 31-32 | 32-33 | 32-33 | 27-28 | 34-35 | 35-36 | 30-32 | 32-33 | 30-31 | 65-63 | 58-60 | 54-55 | 63-65 | 56-58 | 53-55 | 68-70 | 64-65 | 64-65 | 62-64 | 58-60 | 63-65 | 57-59 | 52-54 | 32-34 |
| June | 25-26 | 33-34 | 34-36 | 34-36 | 28-29 | 23-24 | 31-32 | 32-33 | 32-33 | 26-27 | 34-35 | 35-36 | 30-32 | 33-34 | 30-31 | 65-63 | 58-60 | 54-55 | 63-65 | 56-58 | 53-55 | 70-72 | 66-68 | 66-68 | 64-66 | 60-62 | 63-65 | 57-59 | 52-54 | 32-34 |
| July | 26-27 | 34-35 | 36-37 | 36-37 | 29-30 | 24-25 | 32-33 | 35-36 | 35-36 | 27-28 | 37-38 | 37-38 | 32-33 | 35-36 | 31-32 | 63-70 | 60-62 | 55-57 | 65-67 | 58-60 | 54-56 | 70-72 | 67-68 | 68-69 | 65-67 | 62-64 | 64-66 | 58-60 | 53-55 | 33-34 |
| Aug. | 26-27 | 35-36 | 37-38 | 37-38 | 30-31 | 24-25 | 33-34 | 36-37 | 36-37 | 27-28 | 39-40 | 39-40 | 33-34 | 36-37 | 31-32 | 63-70 | 60-62 | 55-57 | 65-67 | 58-60 | 54-56 | 70-72 | 67-68 | 68-69 | 66-67 | 62-64 | 64-66 | 58-60 | 53-55 | 33-34 |
| Sept. | 26-27 | 35-36 | 36-37 | 36-37 | 30-31 | 24-25 | 33-34 | 35-36 | 35-36 | 27-28 | 39-40 | 39-40 | 33-34 | 35-36 | 31-32 | 63-70 | 60-62 | 55-57 | 65-67 | 58-60 | 54-56 | 70-72 | 67-68 | 68-69 | 66-67 | 62-64 | 64-66 | 58-60 | 53-55 | 33-34 |
| Oct. | 26-27 | 34-35 | 36-37 | 35-36 | 30-31 | 24-25 | 33-34 | 35-36 | 34-35 | 27-28 | 37-38 | 37-38 | 33-34 | 35-36 | 31-32 | 67-68 | 60-62 | 55-57 | 65-67 | 60-62 | 54-56 | 70-72 | 67-68 | 68-69 | 66-67 | 62-64 | 64-66 | 58-60 | 53-55 | 33-34 |
| Nov. | 26-27 | 35-36 | 36-37 | 36-37 | 30-31 | 24-25 | 33-34 | 35-36 | 35-36 | 27-28 | 38-39 | 38-39 | 33-34 | 35-36 | 31-32 | 67-68 | 60-62 | 55-57 | 65-67 | 60-62 | 54-56 | 70-72 | 67-68 | 68-69 | 66-67 | 62-64 | 64-66 | 58-60 | 53-55 | 33-35 |
| Dec. | 26-27 | 35-36 | 37-38 | 37-38 | 31-32 | 24-25 | 34-35 | 36-37 | 36-37 | 28-29 | 38-39 | 38-39 | 33-34 | 35-36 | 31-32 | 68-69 | 60-62 | 55-57 | 65-67 | 60-62 | 54-56 | 72-73 | 68-69 | 69-70 | 67-68 | 63-65 | 65-67 | 59-60 | 53-55 | 33-35 |

*** Combing and Clothing " added to 1/2 Blood in Ohio and Michigan groups in July, 1915, and dropped in October, 1915.

† 12 mos. medium dropped, after 1914, and " Spring fine and fine medium " substituted.

‡ First time these terms are used.

|| No. 4 dropped after 1914.

DOMESTIC WOOL PRICES IN CENTS PER POUND—Continued.

| | Ohio, Penn. and West Virginia | | Mich., Wis. and New York | | Kentucky and Indiana | | Mo., Iowa and Ill. | | Texas | | California | | Territory Wool Mont., Wyo., Utah, Idaho, Ore. | | New Mexico | | Georgia and Southern | | |
|-------|-------------------------------|-------------|--------------------------|-------------|----------------------|-------------|--------------------|-------------|---------------|-----------|---------------|--------------|---|-------------|---------------|-------|----------------------|-------|-------------|
| | Unwashed | | Unwashed | | Unwashed | | Unwashed | | Scoured Basis | | Scoured Basis | | Scoured Basis | | Scoured Basis | | Scoured Basis | | |
| | Fine † | 1 2 Blood † | 3 8 Blood † | 1 4 Blood † | Fine Delaine | 1 2 Blood ‡ | 3 8 Blood ‡ | 1 4 Blood ‡ | Braid | 1 4 Blood | 3 8 Blood | Braid | 1 2 Blood ‡ | 3 8 Blood ‡ | 1 4 Blood ‡ | No. 1 | No. 2 | No. 3 | Unwashed |
| 1916 | | | | | | | | | | | | | | | | | | | |
| Jan. | 27-28 35-36 | 38-39 | 38-39 | 32-33 25-26 | 34-35 37-38 | 37-38 29-30 | 39-40 38-39 | 33-34 36-37 | 31-32 68-70 | 60-62 | 55-57 65-67 | 60-62 | 54-56 | 73-74 69-71 | 70-71 68-70 | 64-66 | 66-68 | 59-61 | 54-56 33-35 |
| Feb. | 27-28 35-36 | 39-40 | 39-40 | 32-33 26-27 | 34-35 38-39 | 38-39 29-30 | 40-41 39-40 | 33-34 37-38 | 32-33 70-72 | 62-65 | 55-57 66-68 | 60-62 | 54-56 | 76-78 72-74 | 73-75 70-72 | 65-67 | 68-70 | 62-64 | 55-57 33-35 |
| Mar. | 28-30 36-37 | 39-40 | 39-40 | 33-34 27-28 | 35-36 38-39 | 38-39 30-31 | 40-41 39-40 | 33-34 37-38 | 32-33 73-75 | 62-65 | 55-57 68-70 | 60-62 | 54-56 | 76-78 72-74 | 73-75 70-72 | 65-67 | 68-70 | 62-64 | 55-57 33-35 |
| Apr. | 30-31 37-38 | 39-40 | 38-39 | 33-34 27-28 | 35-36 39-40 | 38-39 30-31 | 40-41 39-40 | 33-34 38-39 | 32-33 73-75 | 62-65 | 55-57 70-72 | 60-62 | 54-56 | 78-80 72-75 | 73-75 70-72 | 67-68 | 63-70 | 62-64 | 55-58 33-35 |
| May | 30-31 37-38 | 39-40 | 38-39 | 33-34 27-28 | 35-36 39-40 | 38-39 30-31 | 40-41 39-40 | 33-34 38-39 | 32-33 75-77 | 63-66 | 55-57 72-73 | 62-64 | 55-57 | 78-80 72-75 | 73-75 70-72 | 67-68 | 63-70 | 63-65 | 55-58 34-35 |
| June | 30-31 37-38 | 39-40 | 38-39 | 33-34 27-28 | 35-36 39-40 | 38-39 30-31 | 40-41 39-40 | 33-34 38-39 | 32-33 75-77 | 63-66 | 55-57 73-75 | 62-64 | 55-57 | 80-82 75-77 | 78-80 72-73 | 69-70 | 72-75 | 66-68 | 58-60 35-36 |
| July | 30-31 37-38 | 41 | 40 | 34-35 27-28 | 35-36 40 | 39-40 31-32 | 42-43 41-42 | 35-36 39-40 | 38-39 33-34 | 78-80 | 70-75 | 60-65 78-80 | 67-72 | 57-63 | 82 | 76 | 73 | 65 | 58 35-36 |
| Aug. | 30-31 39 | 42 | 41 | 35 27-28 | 36-37 41-42 | 40-41 33-35 | 44-45 44 | 36-37 40 | 39-40 36-37 | 80-82 | 70-75 | 60-65 80-82 | 70-72 | 57-63 | 85 | 78 | 74 | 66 | 59 36-37 |
| Sept. | 30-31 39-40 | 42 | 40-41 | 36 27-28 | 36-37 41-42 | 40-41 35-36 | 44-45 44 | 36-37 40 | 39-40 36-37 | 82-85 | 70-75 | 60-65 82-85 | 70-72 | 57-63 | 88-90 | 80 | 72 | 70 | 60 37-38 |
| Oct. | 32-33 39-40 | 40-42 | 40-42 | 36-37 29-30 | 37-38 41-42 | 40-41 35-36 | 44-45 43-44 | 36-37 40-42 | 39-40 36-37 | 80-85 | 70-75 | 57-58 80-85 | 65-70 | 60-62 | 88-90 | 83-85 | 78-80 | 63-65 | 58-60 37-38 |
| Nov. | 33-35 40-43 | 43-45 | 42-44 | 38-41 32-33 | 40-41 42-43 | 41-42 37-38 | 45-46 44-45 | 37-38 45-46 | 43-45 39-40 | 85-87 | 75-78 | 63-65 85-90 | 70-75 | 62-64 | 95-98 90-95 | 83-85 | 63-70 | 60-62 | 60-62 39-40 |
| Dec. | 36-38 47-49 | 48-50 | 45-47 | 42-44 36-38 | 45-49 48-50 | 45-46 42 | 53-56 53-55 | 38-40 46-48 | 46-47 40-44 | 95-105 | 85-88 | 75-78 95-100 | 75-80 | 65-67 | 100-10 95-100 | 88-93 | 73-75 | 63-65 | 63-65 40-42 |

DOMESTIC WOOL PRICES IN CENTS PER POUND—Continued.

| | Ohio, Penn. and West Virginia | | Mich., Wis. and New York | | Kentucky and Indiana | | Mo., Iowa and Ill. | | Texas | | California | | Territory Wool Mont., Wyo., Utah Idaho, Ore. | | | | | New Mexico | | Georgia and Southern | | | | | | | | | | | |
|-------|-------------------------------|-----------------------------|-----------------------------|--------------|----------------------|----------------------|--------------------|----------------------|----------------------|-------|------------------------------|-----------------------------|--|--------------|-------------|-----------|-----------------------------|-------------------------------|----------------------|----------------------|----------------------|-------|-------|-------|----------|-----|-------|-------|-------|-----|-------|
| | Unwashed | | Unwashed | | Unwashed | | Unwashed | | Scoured Basis | | Scoured Basis | | Scoured Basis | | | | | Scoured Basis | | | | | | | | | | | | | |
| | 1 ² Blood Staple | 3 ⁵ Blood Staple | 1 ⁴ Blood Staple | Fine Delaine | 3 ⁵ Blood | 1 ⁴ Blood | Braid | 3 ⁵ Blood | 1 ⁴ Blood | Braid | 12 mos. Fine and Fine Medium | Spring Fine and Fine Medium | Fall Fine and Fine Medium | 12 mos. Fine | Spring Fine | Fall Fine | Staple Fine and Fine Medium | Clothing Fine and Fine Medium | 1 ² Blood | 3 ⁵ Blood | 1 ⁴ Blood | No. 1 | No. 2 | No. 3 | Unwashed | | | | | | |
| 1919 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Jan. | 57 | 74 | 75 | 78 | 66 | 55 | 72 | 73 | 77 | 63 | 75 | 78 | 65 | 72 | 76 | 63 | 150 | 135 | 120 | 152 | 135 | 135 | 160 | 145 | 163 | 130 | 128 | 148 | 130 | 82 | 64 |
| Feb. | 56 | 67 | 66 | 63 | 64 | 55 | 65 | 64 | 62 | 61 | 67 | 68 | 60 | 64 | 61 | 60 | 140 | 130 | 120 | 140 | 132 | 130 | 152 | 145 | 142 | 120 | 105 | 146 | 125 | 80 | 59 |
| Mar. | 54 | 66 | 60 | 58 | 64 | 53 | 65 | 59 | 56 | 61 | 65 | 62 | 53 | 57 | 55 | 60 | 140 | 130 | 120 | 140 | 132 | 130 | 158 | 140 | 148 | 110 | 100 | 148 | 125 | 70 | 54 |
| Apr | 53 | 67 | 60 | 54 | 70 | 52 | 66 | 58 | 53 | 67 | 138 | 125 | 105 | 138 | 130 | 110 | 165 | 140 | 165 | 145 | 105 | 95 | 155 | 155 | 148 | 100 | 105 | 155 | 128 | 90 | 52 |
| May | 53 | 67 | 60 | 54 | 70 | 52 | 66 | 58 | 53 | 67 | 150 | 135 | 105 | 150 | 132 | 112 | 165 | 150 | 155 | 110 | 95 | 160 | 130 | 90 | 53 | 110 | 95 | 160 | 130 | 90 | 53 |
| June | 60 | 70 | 62 | 58 | 73 | 58 | 69 | 61 | 55 | 72 | 155 | 140 | 110 | 155 | 135 | 115 | 175 | 155 | 160 | 120 | 107 | 160 | 135 | 100 | 55 | 120 | 107 | 160 | 135 | 100 | 55 |
| July | 68 | 80 | 72 | 70 | 78 | 63 | 65 | 75 | 78 | 70 | 160 | 135 | 115 | 185 | 165 | 185 | 165 | 185 | 165 | 180 | 135 | 140 | 160 | 150 | 120 | 135 | 140 | 160 | 150 | 120 | 57-62 |
| Aug. | 70 | 80 | 70 | 68 | 83 | 63 | 65 | 75 | 78 | 70 | 160 | 135 | 115 | 185 | 165 | 185 | 165 | 185 | 165 | 180 | 135 | 140 | 160 | 145 | 115 | 135 | 140 | 160 | 145 | 115 | 57-62 |
| Sept. | 70 | 81 | 70 | 68 | 83 | 63 | 65 | 75 | 78 | 70 | 160 | 135 | 115 | 185 | 165 | 185 | 165 | 185 | 165 | 175 | 135 | 135 | 156 | 140 | 110 | 135 | 140 | 160 | 140 | 110 | 57-62 |
| Oct. | 67 | 80 | 67 | 64 | 83 | 65 | 75 | 60 | 60 | 63 | 180 | 160 | 150 | 180 | 160 | 130 | 200 | 185 | 170 | 135 | 115 | 156 | 140 | 110 | 58-64 | 110 | 58-64 | 110 | 58-64 | 110 | 58-64 |
| Nov. | 68 | 81 | 68 | 65 | 85 | 68 | 78 | 65 | 63 | 38 | 190 | 163 | 153 | 180 | 160 | 130 | 200 | 185 | 170 | 135 | 115 | 160 | 140 | 110 | 58-60 | 140 | 110 | 58-60 | 140 | 110 | 58-60 |
| Dec. | 70 | 83 | 70 | 67 | 88 | 70 | 85 | 70 | 65 | 40 | 200 | 165 | 155 | 185 | 165 | 135 | 200 | 190 | 180 | 140 | 115 | 165 | 145 | 110 | 60-65 | 145 | 110 | 60-65 | 145 | 110 | 60-65 |

| 1920 | 70 | 85 | 70 | 62 | 94 | 68 | 80 | 69 | 66 | 88 | 72 | 68 | 41 | 66 | 63 | 40 | 190 | 165 | 153 | 190 | 165 | 145 | 200 | 165 | 183 | 135 | 112 | 170 | 128 | 65 | 57 |
|-------|----|----|----|----|-----|-------|-------|-------|-------|-------|----|----|----|-------|-------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|-------|
| Jan. | 75 | 85 | 70 | 67 | 98 | 72 | 82 | 69 | 68 | 93 | 72 | 68 | 41 | 66 | 64 | 40 | 195 | 165 | 153 | 190 | 170 | 145 | 205 | 175 | 187 | 135 | 112 | 175 | 128 | 60 | 55 |
| Feb. | 76 | 85 | 70 | 66 | 100 | 73 | 82 | 68 | 66 | 95 | 72 | 67 | 35 | 65 | 63 | 35 | 195 | 170 | 155 | 195 | 175 | 150 | 205 | 175 | 190 | 130 | 112 | 180 | 128 | 65 | 52 |
| Mar. | 77 | 87 | 70 | 66 | 100 | 70 | 75 | 65 | 60 | None | 70 | 65 | 30 | 65 | 60 | 30 | 190 | 160 | 150 | 190 | 170 | 150 | 200 | 170 | 185 | 130 | 115 | 185 | 160 | 80 | 54 |
| Apr. | 75 | 77 | 66 | 60 | 90 | 70 | 75 | 60 | 55 | None | 65 | 60 | 25 | 60 | 55 | 25 | 170 | 150 | 140 | 175 | 160 | 140 | 200 | 160 | 170 | 120 | 100 | 175 | 150 | 70 | 50 |
| May | 70 | 72 | 61 | 55 | 80 | 65 | 70 | 60 | 55 | None | 65 | 60 | 25 | 60 | 55 | 25 | 165 | 140 | 130 | 165 | 150 | 130 | 175 | 150 | 150 | 95 | 80 | 150 | 130 | 50 | 40 |
| June | 60 | 65 | 54 | 47 | 70 | 60 | 65 | 55 | 47 | None | 60 | 55 | 25 | 55 | 50 | 25 | 165 | 140 | 130 | 165 | 150 | 130 | 175 | 150 | 150 | 95 | 80 | 150 | 130 | 50 | 40 |
| July | 57 | 62 | 50 | 46 | 72 | 55-53 | 55-58 | 45 | 40 | 60 | 45 | 40 | 18 | 38-40 | 38-40 | 18 | 140 | 120 | 110 | 145 | 125 | 110 | 160 | 150 | 140 | 100 | 75 | 150 | 100 | 60 | 45-39 |
| Aug. | 54 | 61 | 45 | 43 | 70 | 55-53 | 55-58 | 43-45 | 35-40 | 60 | 42 | 38 | 18 | 38-40 | 38-40 | 18 | 130 | 110 | 100 | 125 | 100 | 85 | 145 | 130 | 130 | 90 | 65 | 140 | 85 | 50 | 42-35 |
| Sept. | 54 | 55 | 43 | 40 | 65 | 43-50 | 48-55 | 38-45 | 35-40 | 50-60 | 40 | 37 | 18 | 38 | 35 | 18 | 115 | 95 | 80 | 115 | 85 | 70 | 130 | 120 | 120 | 80 | 55 | 130 | 70 | 40 | 42-35 |
| Oct. | 42 | 42 | 40 | 38 | 60 | 40 | 40 | 38 | 36 | 55 | 42 | 40 | 28 | 38 | 36 | 28 | 100 | 85 | 65 | 90 | 75 | 50 | 120 | 100 | 90 | 75 | 55 | 95 | 75 | 40 | 25 |
| Nov. | 38 | 40 | 32 | 30 | 53 | 36 | 38 | 30 | 28 | 50 | 38 | 36 | 14 | 32 | 28 | 14 | 85 | 70 | 50 | 80 | 60 | 45 | 95 | 90 | 80 | 60 | 50 | 85 | 58 | 30 | 20 |
| Dec. | 38 | 35 | 30 | 28 | 50 | 35 | 33 | 28 | 26 | 45 | 28 | 26 | 13 | 24 | 23 | 12 | 80 | 63 | 45 | 70 | 55 | 40 | 90 | 75 | 75 | 55 | 40 | 75 | 50 | 25 | 18 |

| 1921 | 32-34 | 32-35 | 28-30 | 26-28 | 40-42 | 26-28 | 28-30 | 26-28 | 24-26 | 33-35 | 30-32 | 28-30 | 13-14 | 25-26 | 22-24 | 13-14 | 70 | 55 | 48 | 65 | 52 | 40 | 85 | 70 | 65 | 50 | 40 | 70-75 | 45 | 32 | 20-22 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----|----|-------|
| Jan. | 32-34 | 32-35 | 28-30 | 26-28 | 40-42 | 26-28 | 28-30 | 26-28 | 24-26 | 33-35 | 30-32 | 28-30 | 13-14 | 25-26 | 22-24 | 13-14 | 75 | 58 | 50 | 70 | 55 | 45 | 90 | 75 | 70 | 55 | 42 | 75-78 | 50 | 35 | 20-22 |
| Feb. | 32-34 | 32-35 | 28-30 | 26-28 | 40-42 | 26-28 | 28-30 | 26-28 | 24-26 | 33-35 | 30-32 | 28-30 | 13-14 | 25-26 | 22-24 | 13-14 | 65 | 55 | 45 | 60 | 52 | 40 | 75 | 65 | 60 | 50 | 38 | 70-75 | 40 | 30 | 20-22 |
| Mar. | 32-34 | 32-35 | 28-30 | 26-28 | 40-42 | 26-28 | 28-30 | 26-28 | 24-26 | 33-35 | 30-32 | 28-30 | 13-14 | 25-26 | 22-24 | 13-14 | 70 | 55 | 48 | 65 | 53 | 42 | 90 | 65 | 70 | 55 | 40 | 65 | 50 | 25 | 22 |
| Apr. | 28 | 32 | 27 | 25 | 37 | 25 | 29 | 25 | 24 | 33 | 30 | 27 | 18 | 25 | 24 | 15 | 70 | 55 | 50 | 65 | 53 | 42 | 85 | 65 | 63 | 53 | 39 | 65 | 50 | 30 | 21 |
| May | 28 | 31 | 26 | 24 | 36 | 25 | 28 | 24 | 23 | 32 | 29 | 28 | 18 | 24 | 23 | 14 | 70 | 55 | 52 | 65 | 55 | 45 | 80 | 65 | 68 | 52 | 38 | 65 | 50 | 32 | 20 |
| June | 28 | 30 | 25 | 24 | 35 | 24 | 27 | 24 | 23 | 30 | 28 | 27 | 18 | 23 | 22 | 14 | 75 | 55 | 52 | 65 | 55 | 45 | 80 | 65 | 68 | 52 | 38 | 65 | 50 | 32 | 20 |
| July | 27 | 30 | 26 | 23 | 36 | 24 | 30 | 24 | 23 | 29 | 27 | 25 | 17 | 22 | 21 | 14 | 69 | 59 | 50 | 65 | 55 | 45 | 75 | 62 | 67 | 50 | 40 | 65 | 50 | 35 | 19 |
| Aug. | 28 | 29 | 27 | 24 | 34 | 25 | 30 | 25 | 23 | 30 | 27 | 25 | 17 | 23 | 22 | 14 | 71 | 60 | 52 | 66 | 55 | 45 | 78 | 62 | 67 | 50 | 41 | 65 | 50 | 35 | 20 |
| Sept. | 28 | 30 | 27 | 24 | 33 | 25 | 31 | 25 | 24 | 31 | 28 | 26 | 18 | 24 | 22 | 14 | 75 | 60 | 52 | 68 | 56 | 46 | 80 | 65 | 68 | 52 | 42 | 70 | 55 | 38 | 20 |
| Oct. | 28-29 | 29-30 | 26-27 | 24-25 | 34-35 | 26-27 | 28-29 | 26-27 | 23-24 | 31-33 | 27-28 | 25-26 | 15-17 | 23-24 | 22-23 | 14-16 | 65-75 | 50-55 | 45-50 | 70-75 | 65-68 | 45-50 | 80-85 | 60-65 | 68-72 | 50-55 | 38-42 | 70 | 58 | 40 | 18-20 |
| Nov. | 28-29 | 30-31 | 27-28 | 25-27 | 35-36 | 26-27 | 29-30 | 27-28 | 25-26 | 33-34 | 28-29 | 26-27 | 17-18 | 25-26 | 24-25 | 15-16 | 65-75 | 60-65 | 60-63 | 70-75 | 65-63 | 50-55 | 80-85 | 60-65 | 68-72 | 50-55 | 40-42 | 73 | 60 | 45 | 20-21 |
| Dec. | 30-33 | 36-37 | 33-35 | 31-32 | 40-41 | 29-30 | 34-35 | 32-33 | 31-32 | 38-39 | 35-36 | 33-34 | 19-20 | 31-32 | 29-30 | 18-19 | 80-85 | 67-70 | 65-67 | 30-85 | 70-72 | 63-65 | 90-92 | 68-72 | 78-80 | 55-60 | 50-53 | 77 | 65 | 50 | 25-26 |

DOMESTIC WOOL PRICES IN CENTS PER POUND—Continued.

| | Ohio Penn. and West Virginia | | Mich., Wis. and New York | | Kentucky and Indiana | | Mo., Iowa and Ill. | | Texas | | California | | Territory Wool Mont., Wyo., Utah, Idaho, Ore. | | New Mexico | | Georgia and Southern | | | | | | | |
|-------|------------------------------|-------------|--------------------------|-------------|----------------------|-----------|--------------------|-------|---------------|-------------|---------------|--------------|---|-----------|-----------------------------|-------------------------------|----------------------|-----------|---------|--------|--------|--------|----------|-------|
| | Unwashed | | Unwashed | | Unwashed | | Unwashed | | Scoured Basis | | Scoured Basis | | Scoured Basis | | Scoured Basis | | Scoured Basis | | | | | | | |
| | Fine* | 1 1/2 Blood | 3/8 Blood | 1 1/4 Blood | Fine Delaine | 3/8 Blood | 1 1/4 Blood | Braid | 3/8 Blood | 1 1/4 Blood | Braid | 12 mos. Fine | Spring Fine | Fall Fine | Staple Fine and Fine Medium | Clothing Fine and Fine Medium | 1 1/2 Blood | 3/4 Blood | 1 Blood | No. 1+ | No. 2+ | No. 3+ | Unwashed | |
| 1922 | | | | | | | | | | | | | | | | | | | | | | | | |
| Jan. | 33-35 | 37-38 | 34-36 | 31-33 | 40-42 | 31-33 | 35-37 | 32-34 | 32-34 | None | 40-42 | 36-38 | 26-28 | 36-38 | 34-36 | 20-23 | 90-95 | 75-78 | 70-75 | 60-65 | 85-90 | 68-72 | None | 28-30 |
| Feb. | 37-39 | 38-40 | 36-38 | 33-35 | 46-48 | 33-35 | 36-38 | 34-38 | 33-35 | None | 40-42 | 38-42 | 26-28 | 36-38 | 35-37 | 22-24 | 95-100 | 78-80 | 72-75 | 63-68 | 90-95 | 73-75 | None | 30-32 |
| Mar. | 37-39 | 40-42 | 36-38 | 35-37 | 46-48 | 35-37 | 34-36 | 33-35 | None | 40-42 | 38-40 | 26-28 | 33-35 | 32-35 | 22-23 | 90-95 | 75-78 | 70-75 | 60-65 | 85-90 | 70-73 | None | 28-30 | |
| Apr. | 37-38 | 40-41 | 37-39 | 35-37 | 46-47 | 34-36 | 37-38 | 36-38 | 35-37 | 43-45 | 39-41 | 37-38 | 23-25 | 36-38 | 35-37 | 24-25 | 105-10 | 90-95 | 80-85 | 65-100 | 100-05 | 50-55 | 30-32 | |
| May | 40-41 | 43-45 | 41-42 | 38-40 | 50-51 | 36-38 | 40-41 | 40-41 | 38-39 | 45-47 | 43-44 | 41-42 | 32-33 | 40-41 | 38-39 | 33-34 | 120 | 100-10 | 90-95 | 75 | 110-20 | 90-100 | 65-75 | 33-35 |
| June | 40-48 | 45-51 | 41-48 | 43-48 | 50-58 | 38-44 | 43-48 | 40-46 | 38-44 | 47-54 | 43-49 | 41-46 | 32-36 | 40-46 | 38-44 | 33-35 | 125-35 | 110-20 | 100-05 | 80 | 110-20 | 90-100 | 65-75 | 33-40 |
| July | 46 | 50 | 45 | 41 | 55 | 42 | 48 | 45 | 40 | 50 | 49 | 46 | 36 | 42 | 40 | 32 | 120 | 108 | None | 75 | 115 | 100 | 80 | 40 |
| Aug. | 46 | 50 | 46 | 42 | 54 | 42 | 48 | 45 | 40 | 50 | 49 | 46 | 36 | 44 | 42 | 33 | 122 | 108 | None | 82 | 115 | 105 | 80 | 40 |
| Sept. | 48 | 51 | 47 | 44 | 55 | 43 | 49 | 45 | 42 | 50 | 49 | 45 | 36 | 46 | 43 | 35 | 125 | 110 | 95 | 92 | 120 | 110 | 85 | 42 |
| Oct. | 46 | 55 | 50 | 45 | 55 | 45 | 51 | 48 | 43 | 52 | 53 | 55 | 53 | 48 | 43 | 32 | 130 | 120 | 110 | 90 | 120-25 | 110 | 80-85 | 43-45 |
| Nov. | 46 | 55 | 52 | 47 | 55 | 45 | 51 | 50 | 45 | 52 | 53 | 56 | 54 | 49 | 45 | 33 | 130 | 120 | 110-15 | 95 | 120-25 | 110-15 | 82-90 | 43-45 |
| Dec | 47 | 55 | 54 | 50 | 57 | 46 | 52 | 48 | 48 | 55 | 55 | 59 | 56 | 50 | 47 | 34 | 135 | 130 | 120 | 105-10 | 120-25 | 110-15 | 85-90 | 43-45 |

** Clothing "omitted.

†† Staple "omitted.

‡‡ No. 1, 2, and 3 changed to Fine, Average, Navajo for April, May, June.

REVIEW OF WOOL MANUFACTURE IN THE FIRST HALF OF 1923.

ACCORDING to the plan begun in the Bulletin for January, 1923, with the assistance of members of the Association and a few others, a review of the manufacture of tops, yarns and woven wool fabrics for the first six months of the year is presented.

At the beginning of the season stocks of cloth and garments in the hands of garment makers and retailers were much less than normal. Overcoatings were almost wholly disposed of and the stock of suitings was not large. The demand for worsteds continued to increase and the volume of business in carded woolens was still strong.

Skilled labor was scarce and maximum production in some mills was prevented. Even after the advance of $12\frac{1}{2}$ per cent in wages in New England, on May 1, there was shortage of labor due to the building and metal working trades outbidding the textile industry. The wage increase followed the voluntary award made by the American Woolen Company. During the season there were no labor controversies.

In all lines of fabrics the price level was somewhat higher than that of the corresponding season last year, although lower than expected. Further price advances were made in April to cover the increased cost of labor and the continued rise in the price of wool.

The opening of the season was active, promising a large amount of business. Some manufacturers operated continuously at maximum production, yet others, toward the end of the season, experienced a lessening of the pressure and an increase in cancellations. The decline was noticed more in the manufacture of fancy suitings than in staples, overcoatings and cloakings.

In New England some of the mills on the Merrimac River were obliged to shut down on May 1, the river running eight and one-half feet over the dam at Lawrence when the water

reached the highest level in twenty years. Freshets in Maine also caused mills to close.

In April the American Woolen Company bought the Black River Mill at Ludlow, Vermont, taking possession April 30. On April 25, the stockholders of the Slater Mills voted to accept the proposal of the American Woolen Company to purchase the woolen and worsted divisions of the Slater Mills at South Village, Webster, Mass. This became effective on May 1. The French River Textile Company was consolidated with the Guerin interests.

During the past season the industry lost a prominent yarn spinner, Mr. Joseph Guerin, who died May 6, 1923. Mr. George A. Draper, Treasurer of the Draper Corporation, died on February 7, 1923.

In Congress the French-Capper branding bill, at one time known as the "Truth in Fabric" and later changed to "Wool Woven Fabric" bill, was placed upon the calendar of the Senate, but Congress adjourned before it was reached. In twelve states branding bills were introduced, but none was passed by the legislatures except in Texas, where it was vetoed by the Governor, and in Colorado, where an amendment, adopted in the Senate, materially limited the original scope of the bill. The latter bill was signed by the Governor and is now a law.

In New Hampshire and Rhode Island, attempts were made to pass legislation providing for a 48 hour week.

TOPS.

There was only a slight fluctuation in the top market for the past six months. On January 1, quotations were generally from two to five per cent above those prevailing in December, 1922. While some qualities remained steady throughout the period, in no case was there a difference of more than seven per cent.

During the first part of the year considerable uneasiness was evident among topmakers, speculating as to the chances of imported tops replacing domestic, but the tariff and the steady tendency of exchange made importation unprofitable. The principal foreign competition was in 48's, 50's and 56's qualities, which found a ready market in this country because

the lack of demand for them abroad and the large stocks held there forced prices much below those for similar domestic grades.

Fine and $\frac{1}{2}$ blood were distinctly strong, owing to the large demand for the finer worsteds and because those grades of wool were scarce and high. Foreign tops of those types had little influence on the domestic market, the price of wool being too high to encourage the importation of the finer qualities.

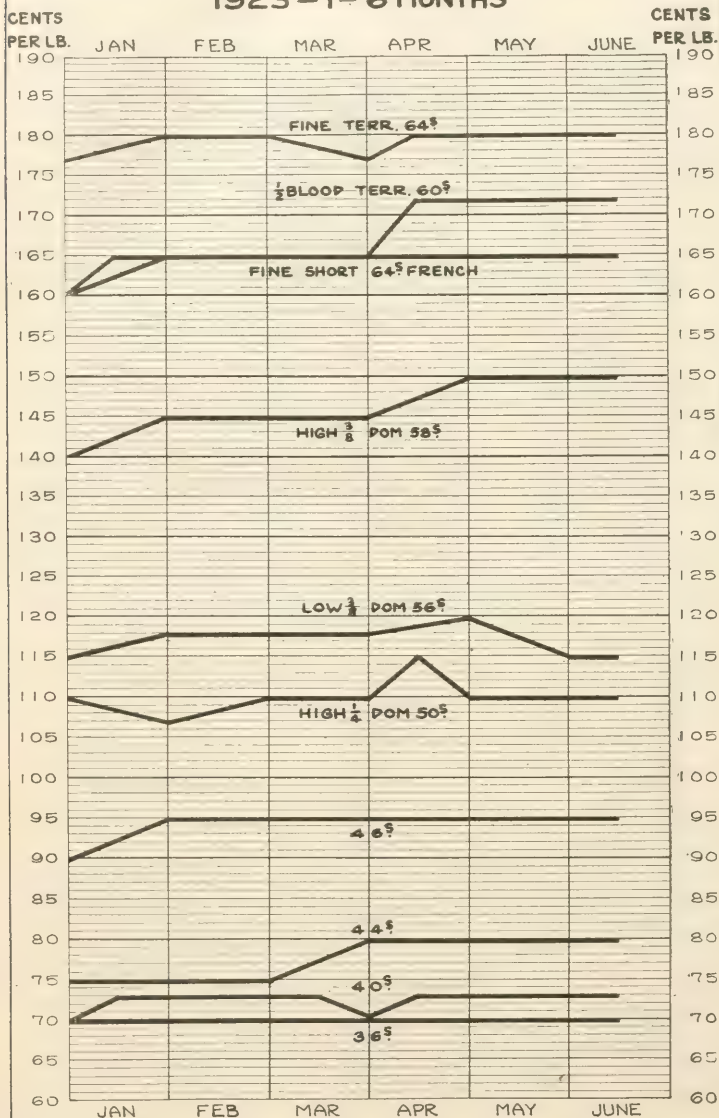
The production of 3/8's blood was a very interesting feature of the season. After the beginning of the year orders for men's wear developed rapidly and considerable business for high 3/8's was booked, prices advancing less than five per cent through January. This was in contrast to conditions last year when they were almost unsalable through January and February though freely offered at from 90 to 95 cents. On the other hand, low 3/8's tops dragged heavily because the principal users were knitters whose orders were not placed in substantial amounts until March and April. The demand for them for men's wear goods was very small. As a result, the prices of such tops remained at a low point throughout the past six months. The relative strength of high 3/8's wool and tops and the dragging tendency of the low 3/8's was a strange contrast.

During June a substantial amount of 3/8's tops changed hands on a speculative basis, the spinners feeling that sooner or later there would be a call for them. Undoubtedly low 3/8's tops at \$1.15 were considerably out of line, and with anything like a normal demand should have been worth at least ten per cent above that figure.

High $\frac{1}{4}$ blood domestic tops, used extensively in knitting yarns, remained exceptionally strong with a continual good demand. While prices for 44's and 46's, used largely in the men's wear fabrics, were also firm and substantial amounts of 46's were consumed by the knitters, business was moderate in the lower grades.

A demand for higher wages in the textile mills during March and April resulted generally in the granting of a $12\frac{1}{2}$ per cent advance. Practically all combers were obliged to readjust their tariffs to include the increased cost of combing.

FLUCTUATIONS IN PRICES OF TOPS

1923 - 1ST 6 MONTHS

During the last three months the amount of new business in all grades of tops fell off gradually. Manufacturers and spinners as a whole bought rather heavily during the first three months to cover their contracts and needs for some time ahead. At the end of June the situation was quite unsettled. Manufacturers claimed they could not do new business with wool prices at the high level and offered spinners very few orders. Since topmakers depend upon spinners for the bulk of their business and they, likewise, rely upon manufacturers, very little business was forthcoming.

WORSTED AND WOOLEN YARNS.

January found the worsted and woolen yarn spinners very well occupied with orders enough to assure operation for about three months. New orders were booked steadily to replace completed contracts. Prices showed a small profit based on current quotations for wool and tops, and the trade, in general, was well satisfied with the outlook.

These conditions were reported by all divisions of the spinning industry. The demand for yarns was general from all branches of wool manufacture. In March, yarn prices advanced slightly, due to the continued demand and the strength shown in the wool market. The consumption of wool was breaking all records, reaching 80,000,000 pounds, grease basis, for the month of January, and amounting to over 78,500,000 pounds for March. In this latter month the worsted spindles were, on account of overtime, over 102 per cent and the woolen spindles more than 98 per cent active. In addition to this the stocks of wool textiles in the hands of jobbers, manufacturing clotheirs and retailers were much below normal. All of the great industries were active, with labor, not only generally well employed at high wages but with a consequently large purchasing power.

In view of these conditions the sudden falling off in volume of new business about the middle of April was a great surprise to the yarn trade. The situation was hard to diagnose correctly; retailers were complaining of poor business and refused to place new orders. Reports from the piece goods market in New York indicated a large number of cancellations

in both men's wear and dress goods trades. Merchants and garment manufacturers all along the line would not stock up with merchandise, remembering the slump of 1920 and fearing a drop in values. Financial interests apparently dreading another period of inflation, advised caution in operation. The net result was a slowly diminishing production of all classes of yarns.

The situation was not improved by the cold weather which prevailed up to the end of May; and while most spinners continued to run at nearly 100 per cent capacity, some weak spots developed with a consequent slight decline in prices. Early in June a few days of fine seasonal weather produced a marked change in the feeling throughout the trade. Makers of knitted outerwear were the first to show signs of activity, calling for quick deliveries on unfilled yarn contracts and also placing new orders in fair volume. The weaving trade was next to respond to the better feeling and some very good business was booked, both for men's wear and dress goods.

The schedule of prices given below shows that the fluctuations were small and indicates that basic conditions throughout the country are satisfactory. It would seem also to show that manufacturers of wool textiles intend to run only on firm orders rather than to build up stocks to maintain production with the possibility of being forced later to curtail production, with resulting losses.

WORSTED YARN PRICES (Bradford System).

First Six Months—1923.

| | 2/24s 1/4 Blood. Domestic. | 2/36s 3/8 Blood. | 2/40s 1/2 Blood. | 2/50s Fine Medium. |
|-------------|----------------------------------|---------------------|---------------------|--------------------------|
| January 1, | \$1.60 | \$2.10 | \$2.45 | \$2.75 |
| February 1, | 1.60 | 2.10 | 2.45 | 2.75 |
| March 1, | 1.62½ | 2.12½ | 2.50 | 2.80 |
| April 1, | 1.62½ | 2.15 | 2.50 | 2.80 |
| May 1, | 1.62½ | 2.15 | 2.50 | 2.80 |
| June 1, | 1.60 | 2.12½ | 2.45 | 2.80 |

French spun 2/40s and 2/50s from 5c to 10c higher
than the above prices.

MEN'S WEAR WOOLENS.

The season opened actively about the last week of January, the large business in overcoatings, then ended, having delayed the suitings. Buyers bought freely, the entire production being sold in about four weeks. Prices, about 15 per cent above those of the previous heavy-weight season, were lower than expected. This advance was due almost entirely to the increased cost of wool. A further advance of about ten per cent was made for duplicate and new orders to compensate for the increasing strength of the wool market and the wage increase. As the season progressed cancellations became more numerous with the result that the total business was not much above 70 per cent of the normal, yet in some fancy piece dyed fabrics maximum production was continuous. The large demand for overcoatings diminished the available looms for men's wear woolen suitings. While the stocks carried over from last season were relatively small, the larger proportion was homespun and tweeds. This militated against a larger volume of those during the past season. In design, checks were still acceptable; the demand for pencil stripes was weakened. In colors, novelties predominated.

MEN'S WEAR WORSTEDS.

The season opened between February 1 and 15, slightly later than usual. In general, it was active and fairly satisfactory. Orders were placed promptly in almost all cases, but with fancy piece dyed worsteds they extended over a longer period than usual. The trade was encouraged by the prices and bought before the manufacturers would be forced to make price advances on account of the strengthening wool market. In many cases about 75 per cent of the season's production was booked during the initial season; in several mills 100 per cent was taken, and goods, except for serges and staple worsteds, were allotted among the customers.

As the season progressed cancellations increased but not abnormally. Among the fancy worsteds but few duplicate orders were received. At the opening prices ranged from seven to ten per cent in excess of the last heavyweight season, which was less than expected. In some cases, depending upon the grade of wool used, the advance was greater.

With but few exceptions the volume of business was satisfactory, even greater than estimated, amounting to more than 90 per cent.

There was a slight improvement in the market for serges. Among fancy worsteds the demand for clear finished fabrics was greater than for undressed. Pencil stripes were less acceptable; the tendency was toward the more extreme fancy styles with a desire for something novel. Colors for the season were largely black, blue, and brown, with some demand for lighter shades in tans and gray tones.

OVERCOATINGS FOR MEN.

The season opened very actively on February 1, the usual time for the past few years. Before the war it began about a month earlier. Soon after the opening many mills were reported to be on the allotment basis, causing over-buying in those lines in greatest demand, particularly plaid back overcoatings. Orders were placed for total production in less than one month.

Prices were 20 per cent higher than for the corresponding season last year, and were considered reasonable by the trade as the large initial buying indicated. The volume of business met the expectation of the manufacturers. In some mills maximum production continued to the end of the season, but in others it was considerably curtailed by shortage of labor. In June a period of uncertainty and hesitation developed in the piece goods market in spite of the small supply of the goods in most demand; it was less noticeable in heavy woolens than in worsted and woolen suitings. The prevailing fashion still called for the plaid back, but with lighter and more brilliant colorings. The demand for tans and tan mixtures continued.

WORSTED DRESS GOODS.

The season opened actively about the first of February. In general, buyers were prompt in placing their orders and 100 per cent production was booked. In some lines, however, a smaller proportion was taken during this early period. In active weaves prices were about five per cent higher than in the fall season a year ago.

The volume of business was greater than expected. Maximum production was curtailed in some mills because of inability to secure a complement of workers. Poiret twills and all wool crepes were popular. Among colors the choice of grays, tans and creams was emphasized.

The longer skirts dictated by fashion required a greater production in dress goods.

WOMEN'S WOOLEN CLOAKINGS AND SUITINGS.

The season opened about February 1 with initial business active and about normal. Original orders were completed in three to four weeks, not less than 75% of production being placed in this early period. The production of some mills, however, was completely sold. Prices, which were lower than expected, ranged from 10 to 15 per cent higher than last year. Upon duplicate orders a further advance of ten per cent was made by some to cover the increased cost of wool and labor. The volume of business was greater than estimated, and in certain pile fabrics, like bolivias, was more than mills could accept, and goods had to be allocated to customers. In other fabrics, production was maintained at a maximum. In the cheaper lines of mixture coatings production was active but in camel's hair goods it dropped. Fancy back overcoatings continued in vogue, and over-bar effects were popular. In bolivias, black and plain shades of brown, tan and blue were demanded. The call for grays increased, while that for tan shades diminished.

Obituary.

THOMAS P. BEAL.

THOMAS PRINCE BEAL, president and a director of the Hamilton Woolen Company, director of the Bigelow-Hartford Carpet Company, and president of the Second National Bank of Boston for the last 35 years, died at his summer home in Beverly, Massachusetts May 24, 1923, after an illness of about three weeks. Mr. Beal was also a director of the American Security Company of New York and the Clinton Wire Cloth Company, and a former director of the Boston & Maine Railroad. He was one of the proprietors of the Mt. Auburn Cemetery, a trustee of the Suffolk Savings Bank for Seamen and Others, and for a time acted as deputy governor of the Federal Reserve Bank of Boston, of which he was a class A director. He was also president of the Boston Clearing House Association. He served as a member of the Boston Common Council in 1885, being also active in the Boston Chamber of Commerce and he was a member of the Somerset, Union, Algonquin, Harvard, Essex County, Country and Montserrat Golf Clubs.

Thomas P. Beal, son of James H. Beal and Judith D. Beal was born in Charlestown, Massachusetts, on September 27, 1849, and was graduated from Harvard in 1869, becoming secretary of his class. He took his A. M. degree at Harvard in 1872. The two years following his graduation, he spent in travel in Europe. After a short period in business in New York, he entered the employ of the Second National Bank, where his father was president. In 1873 he became a director and was made vice-president in 1878. Ten years later, on his father's death, he became head of the bank, in which position he remained until his death.

On October 27, 1881, Mr. Beal married Miss Ida De Ford of Baltimore. He is survived by two sons, Thomas P. Beal, Jr., vice-president and a director of the Second National Bank, and William De Ford Beal.

JOSEPH GUERIN.

JOSEPH GUERIN, a well known manufacturer of Rhode Island, and founder of the Guerin Spinning Company, parent organization of the Guerin Mills, Inc., died May 6 at his home in Woonsocket, in his seventy-second year.

He was born October 4, 1851 in Foret, Belgium. He went to work in the mills there when ten years old, and worked at woolen and worsted spinning until he became boss carder and spinner in a mill at Verviers. When twenty-nine years old, he went to Schio, Italy to become superintendent of a yarn spinning and carding mill. After a service of twelve years in

that place, he came to the United States in 1892 in pursuance of plans long made, having sent his son, Theophile, a year before his arrival to look over the field.

After being employed in this country a year, he returned to Belgium to purchase second-hand spinning machinery, shipped it to Woonsocket, Rhode Island, and in 1893 started the Guerin Spinning Company to make woolen and worsted yarns, occupying two floors in the Sayles and Prendergast Mill.

In 1895 Mr. Guerin became associated with the late Colonel Stanley G. Smith and former Governor Aram J. Pothier, and the Guerin Spinning Company bought and operated the old Jenckes mill, a three and a half story stone structure built in 1828. The new owners immediately built a large shed in addition to the factory and took in Colonel Latimer W. Ballou as a partner. They were connected with the mill for a number of years, until the Guerin-Pothier interests purchased the Smith holdings and later acquired the Ballou interests. Later they built the Montrose Worsted Company weaving plant, the Alsace Worsted Company spinning factory, and the Rosemont Dyeing Company plant in Woonsocket. Mr. Guerin was president, agent, and general manager of the Guerin Spinning and other companies, and Governor Pothier was treasurer, the former retiring about five years ago.

A few years later the Guerin family and others, headed by Theophile Guerin, formed the Philmont Worsted Company and built a mill in Woonsocket for the manufacture of yarns by the Bradford process. Then the Guerin Spinning Company purchased the River Spinning Company plant and continued to operate it for the manufacture of yarns by the Belgium process. In January, 1922, the Guerin Mills, Inc., with a \$7,000,000 capital, took over the six mills mentioned. Former Governor Pothier, after twenty-eight years of association as treasurer of the mills operated by the Guerin-Pothier interests, retired as treasurer of the various companies when they were absorbed by the Guerin Mills, Inc. Recently the latter added a seventh unit to its group by the purchase of the weaving plant of the French River Textile Company at Mechanicsville, Conn.

In 1873 Mr. Guerin married Miss Eugenie Hermann at Foret, Belgium. They had two sons, Theophile and Colonel Edmond H., both of Woonsocket, who were associated with their father in manufacturing enterprises, and a daughter, Marie, wife of Octave Pothier, who died some years ago. Mr. Guerin is also survived by two brothers, Jean Pierre Guerin of Foret, Belgium, and Hubert Guerin of Woonsocket.

ERNEST C. KLIPSTEIN.

ERNEST C. KLIPSTEIN, secretary-treasurer of A. Klipstein & Company, president of E. C. Klipstein & Sons Company, and identified in an official capacity with a number of well known chemical manufacturing and distributing firms, died April 29, 1923 at St. Vincent's Hospital, New York City, at the age of 72.

Born of Revolutionary stock in Marshall, Fauquier County, Virginia, December 24, 1851, he received his education at Roanoke College, Salem, Virginia. After several years of teaching, a desire to study medicine led him to decide to enter the retail drug business in order to obtain a thorough grounding in materia medica. To complete his studies, he went to New York in 1875.

During the year previous he had made the acquaintance of A. Klipstein, who in 1872 had established himself in New York as the selling agent of Edmond Renault & Co. and of A. Poirier & Co., both of Paris, and was subsequently employed by him as salesman. The business held out so many possibilities for development to a mind quick to grasp its potentialities, that the study of medicine was abandoned. The connection formed was continued, with the result that in 1894, when the business was incorporated under the name of A. Klipstein & Co., E. C. Klipstein became treasurer.

Mr. E. C. Klipstein was internationally recognized as a pioneer in the American chemical industry, his contributions to it being the result of an outstanding ability to sense the technical value of chemicals and to exploit that value commercially. Especially was this true in the textile and leather fields, where his achievements and technical knowledge were most appreciated his ideas successfully adopted, and where he was regarded as an authority.

Among his contributions to the industry were: vat colors for American dyers; the substitution of formic acid for acetic acid and sulphuric acids in dyeing; the adaptation of sulphonating oils and the production of chrome acetate for calico printing; the use of tetrachloride of carbon as a non-inflammable solvent for grease and as a fire extinguisher (marketed under the trade name of "Carbona" and known to the country at large); the introduction of quebracho extract from South America; mangrove bark and myrabolams from the Far East.

Mr. Klipstein's interest in the development of the dyeing industry prompted him to found E. C. Klipstein & Sons Company to manufacture colors—one of the first to manufacture sulphur black successfully, and also to manufacture the first synthetic tanning material produced in America.

Other concerns with which he was identified besides those mentioned were: the Bulls Ferry Chemical Company, the Carbona Products Company, the Manetto Company and the Warner Klipstein Chemical Company.

He is survived by Mrs. Klipstein and three sons, Ernest H., Gerald P. and Kenneth H. Klipstein.

Editorial and Industrial Miscellany.

BRITISH WOOL MANUFACTURERS ALARMED OVER INCREASING IMPORTS.

BRITISH wool manufacturers have been much disturbed for some months by keen and ever increasing foreign competition, not only in the world's markets, where two-thirds of their production must be sold, but also in their domestic markets. In them they have been unable, because of a combination of circumstances, to maintain themselves against Belgian and French competition. The seriousness of the situation is compelling constant discussion, and is causing revision of free trade views long held by many.

As early as the middle of January, attention was called by the *Yorkshire Post* to the concern felt "by both spinners and manufacturers about the growth of continental competition in yarns and piece goods and the very difficult position in which this and the continual advance of wool values is placing them." It was asserted that "the extent to which French manufacturers of dress goods are making headway in this country is causing alarm." One reason assigned for these increased imports of dress goods from France "is the depreciation in the value of the franc, and closer examination of statistics affords ground for this assumption inasmuch as during December we took from France 961,837 square yards of these goods, which is far above the monthly average for the whole of last year."

This fact was commented on by a writer in the *Textile Recorder* of March 15, who wrote:

France is now a very serious competitor, not only in neutral markets, but in our own home trade, especially in women's fabrics like gabardines, poplins and fine velours. We can not at the moment compete with France in these goods, and many of our manufacturers have lost large orders which they were able to get last year. France has not taxed herself as we are taxed, nor has Germany, and they neither of them are attempting to pay their debts. We suffer this competition philosophically and not only groan under heavy taxation, but are setting to work to pay our debts to America when we can get nothing in the way of payment of debts due to us by the very countries which are cutting us out in business.

Touching in the issue of March 13 on foreign competition, the writer of the Wool and Textiles column in the *Yorkshire Post* pointed out that while business was badly needed to provide employment for Bradford operatives, many of whom were then on short time, "French-made tops were quoted at 2d. and 3d. per pound below the price at which tops of corresponding qualities can be produced in Bradford." "Not only is Bradford suffering," he continued, "from continental competition in tops and yarns, but pieces also. The French appear to have taken the bulk of this season's dress goods trade by reason of their ability to undersell

our producers as a result of their depreciated rate of exchange." "The outlook for the Bradford worsted industry in the immediate future," he felt, was "not at all encouraging. The cause of the change from the healthy conditions which prevailed up to quite recently is, for the greater part, the advantage our continental rivals have in being able to turn wool already purchased into partially and fully manufactured materials and with the profit by subsequent depreciation in their rate of exchange, to undersell the competitive goods made in this district."

Three days later the same writer reverted to "the advantage which the depreciation of the currencies of France and Belgium is giving to exports of partially and fully manufactured wool textiles to this country." He showed that the imports of woolen and worsted yarns in the first two months of this year amounted to 2,451,649 pounds against 2,399,521 pounds last year, and 949,045 pounds in 1921, and of fully manufactured woolen tissue, that the imports for the same time were 3,499,344 square yards compared with 1,691,474 in the corresponding period last year and 1,938,519 square yards in 1921. The imports from France were 2,884,748 square yards compared with 1,278,102 square yards last year and 1,938,519 in 1921.

That the seriousness of the situation is not overdrawn by the daily press is shown by the editorials which have been printed in the *Bradford Wool Record* and *Textile World*. One in the issue of March 22, headed, "Manufacturers Alarmed", contained the following concerning the importation into England of French cloths which could be sold at prices much below those quoted by home producers:

Of course in a free trade country, such a state of affairs is inevitable under present-day conditions, and while for the moment we have nothing to say on the principle involved, it is useless to try and ignore the fact that even among those who have always been avowed free traders, there is a growing feeling that the abnormal conditions now prevailing call for drastic treatment on the principle that desperate ills require desperate remedies. We understand that the whole question of foreign competition in the home market was carefully considered at a meeting of manufacturers in Bradford this week, and it was decided to place before the Board of Trade a full statement of the exact position.

It is generally understood that French houses are capturing a large share of the trade in dress goods simply because they have a direct advantage through lower conversion costs and the fall in the franc. . . . It is also stated that most of the business now being done with France is on the clear understanding that the contracts become void in the event of the British Government imposing any duty on imported goods. If this correctly represents the case, the remedy would appear to be obvious, especially as producers in this country assert that the public are getting no advantage whatever from the low prices which the importers are paying for French cloths.

Another editorial in the issue of April 26 said:

Low production costs abroad and depreciated currencies are enabling continental competitors to undersell home producers in almost every market of the world. This may be merely a temporary phase, but in the meantime it is exerting a most depressing influence on the British industry and greatly retarding development. What this form of competition actually means may be realized when it is stated on excellent authority that

certain French firms are prepared to buy wool in this country, convert it into yarn, and sell the yarn here at the price quoted for the corresponding quality of tops. Spinners doing business with Leicester manufacturers assert that in many cases their quotations are, on the average, about 8d. per pound above those of their continental competitors.

Again in the issue of May 24, an editorial said:

In this country there is no doubt that continental competition in yarns and piece goods has severely hit spinners, manufacturers and piece merchants. In the first place continental buyers have been largely instrumental in forcing up wool values, and as their mills have been working for a very small nominal profit and have been further assisted in their export trade by depreciation in their currencies, British firms have been beaten at both ends. It is indeed common knowledge that some of the stoutest free traders have had their faith in life-long principles rudely shaken by the unique combination of circumstances brought about mainly as a result of the French occupation of the Ruhr, and it is not surprising, therefore, that advocates of protection are beginning to raise the standard of revolt against the present system.

That these market conditions in Britain cause many former, strong adherents of free trade to question the wisdom of that system, is not surprising. These are times when its advocates will be put to tests severer than those experienced in the past, if they can continue to convince their followers that free trade is best for their country. In that they may succeed, but the grave questions now arising in the minds of many of its heretofore ardent advocates will not weaken the cause of protection either in Great Britain or in other countries. Conditions in Britain do not strengthen the position of those in this country who have been bitter and constant in their attacks on the tariff now in force here. It is evident that one's advocacy of free trade depends largely upon whose ox is being gored. Free trade may be excellent for that country whose position is unique and whose costs of production are lowest, but even in such country, when perhaps temporary competition under unusual conditions interferes with normal exports or domestic trade, great alarm is caused, and the working of free trade is considered not to be so good a thing as when the markets of neutral countries are invaded by huge exports from Great Britain. It all depends upon where the pinch is felt.

FACTS PROVE THAT TARIFF IS NOT ONE OF EXAGGERATIONS.

IF the present tariff is, as Professor J. Laurence Laughlin of the University of Chicago has termed it, a "Tariff of Exaggerations", it has not so appeared to the British wool manufacturers if we are to accept as their views concerning it, the statements contained in an article entitled, "The Outlook in the Wool Textile Industry", published in the *Textile Recorder* for March 15, 1923.

After lamenting that the British woolen and worsted manufacturers "go plodding away whilst the markets of the world are gradually slipping away for one reason or another," and calling attention to the fact that "many firms driven out of the markets for which they have been catering

for so many years", have been compelled "to turn their attention to the home market as being one of the very few now open to them", the writer declared that in spite of the tariff, "we are going to pay [the British debt to the United States] and we are going to pay with goods."

Then he adds: "We are already doing it, in spite of a tariff of sometimes more than 100 per cent: we are beating the American manufacturers in their own markets, and we are beating them by our enterprise and our efficiency. The very instruments which are being forged for our undoing, are sharpening our acumen, brightening our intellect, and electrifying our energies. We are producing novelties and displaying such efficiency that the American producers, safe asleep under their tariff walls, have thought they could ignore, but they are now awakening to the fact that we mean business."

If that is the real situation in the British textile industry, British wool manufacturers (who are themselves complaining bitterly of ruinous Belgian and French competition) have no real complaint to lodge against our new tariff act of 1922. Nor, it would seem, have those of Belgium and France, if they can undersell British manufacturers in British markets.

These facts make it plain that Professor Laughlin's appellation was hastily and unadvisedly chosen, and that his reputation as a writer on economic subjects for accuracy or trustworthiness is open to grave question and justifiable doubt.

RELATION OF OVERSEERS TO PRESENT MANUFACTURING PROBLEMS.

BY JAMES R. MACCOLL.

At the semi-annual meeting of the National Association of Woolen and Worsted Overseers which was held at Rocky Point, Rhode Island, on May 19, 1923, Mr. James R. MacColl, president of the Lorraine Manufacturing Company of Pawtucket, Rhode Island, made an important address on the "Relation of Overseers to Present Manufacturing Problems."

In it Mr. MacColl, we believe, stated correctly the attitude of the country's wool manufacturers when he expressed his belief that owners of the mills "desire to treat their employes justly and liberally." He put his finger on the cause of many irritations in the textile industries which developed in the past into antagonisms and strikes, when he declared that "the overseer should have no favorites", that "everybody under his control should be treated fairly and kindly", and that "nothing is gained by the use of immoderate or profane language."

On the other hand, he just as correctly put his finger on many causes of labor unrest and strikes, when he pointed out that the leader who seeks power for his own aggrandizement or for the gratification which authority to order the actions of others gives to many men, is an unsafe leader, and nothing but bad results can follow acceptance of his advice. It is all too true that many leaders of local unions often seek membership in the

organizations to advance their own interests politically or in the union, rather than the interests of their constituents.

In 1912 the secretary of a Boston Trades Council, which ordered a strike of several thousand men, kept the members of the Council in ignorance of an offer from the employers to submit to arbitration the differences between the two bodies, and that fact reached the ears of the Council's members only after the strike had continued for many weeks, and its participants and their families had endured suffering and privation in the middle of one of our severest winters. At the same time, it appeared that the secretary was drawing a salary as a city employe and also a salary from each of several organizations. Many strikes are due to haste and excitement caused by men bent upon bringing on that state, which like war should be as Mr. MacColl says, "the court of last appeal."

We still have the labor problem with us. Advances have been made despite the determined efforts of radical socialists, communists, and all who are bent upon the destruction of the present social system, rather than its improvement. Its solution is not yet at hand, but that better relations might be secured, were some of the suggestions made by Mr. MacColl in his address adopted, can scarcely be doubted.

It was an interesting and thought provoking effort, and we take pleasure in printing an outline of the principal points which he stressed. He said in part:

Industry is frequently classified under three interests: Capital, Management and Labor. In my opinion, there might well be a fourth estate; namely, Overseers, who are closely related to each of the three other interests. In their careers, Overseers have learned Labor's viewpoint by practical experience. At present, they are closely identified with Management. Their ambition for the future is to be capitalists and have a share in the ownership.

I wish to speak to you briefly on the relation of overseers to present manufacturing problems:

CAPITAL AND LABOR.

The overseer stands between the owner and the employe, and it is his business and duty, on the one hand, fairly to represent the attitude of the owners to their employes, and, on the other hand, the viewpoint of the employes towards the owners in relation to their working conditions. Many industrial troubles have been brought about by the mistakes of overseers. I believe that owners desire to treat their employes justly and liberally. If the overseer does not deal fairly with his help, he may create a wrong impression with regard to the attitude of Capital, and antagonism is developed which need not exist and must be injurious to the business. The overseer should have no favorites. Everybody under his control should be treated fairly and kindly. Nothing is gained by the use of immoderate or profane language. The overseer who commands the respect of his employes by just and fair treatment, combined with quiet firmness and decision, is a valuable asset to any manufacturing concern.

No one can deny that labor organizations, when wisely directed, have been beneficial to the workers. Neither an autocracy of Capital nor of Labor is sound or safe, or likely to result equitably to all concerned. Where labor leaders are mere trouble-makers, seeking to get money or power for themselves without a genuine interest in the welfare of Labor or of the owners, nothing but bad results can follow. It is oftentimes distressing to

see worthy working people duped by unscrupulous labor leaders and led into strikes which could readily be avoided by the exercise of a little patience and co-operation on the part of owners, management and labor.

The labor problem must be solved by a larger participation of Labor in ownership, and a better representation of Labor in the discussion of working conditions. The strike should be the "court of last appeal", only to be used when the issue is important and when discussion and conciliation have been adequately tried and have failed. There would be few strikes if a secret ballot were taken of all the workers who were affected; and if legislation were enacted making such a ballot compulsory, it would be a marked step in the development of more harmonious relations between Capital and Labor.

Forty-eight hour laws for women and children have been much discussed recently in New England. Most of the woollen and worsted mills are already working on this schedule. Cotton manufacturers are not, generally speaking, opposed to forty-eight hours, if this standard were adopted universally throughout the country; but in view of the lower scale of wages in the Southern States, the fact that the sixty-hour schedule still prevails, and that it is impossible in many classes of goods to compete with the South, it is not to be wondered at that there should be strong opposition to anything that will further hamper New England cotton manufacturing by creating conditions that are unfair—and perhaps impossible. Capital and Labor should unite in an effort to establish a *national* forty-eight hour standard. In view of the hours of work in foreign countries, the demand is not unreasonable if carried out on a national basis.

MANAGEMENT.

It is generally recognized that Management is of vital importance in the success of every manufacturing corporation. Two concerns engaged in the same line of manufacture and with similar equipment may show marked inequality in financial results, because of different management. From the overseer group should come the future managers, and it is up to them to prepare themselves for this opportunity. However well managed a concern may be, a considerable percentage of production is lost through mistakes, lack of planning and skill. A capable manager will reduce this loss to as small a percentage as possible.

EFFICIENCY AND PRODUCTION.

For efficiency and production much depends upon the overseer. He has a peculiar opportunity to work out improvements in the operation and construction of machinery, to observe and remove the causes which retard production, and to select employees adapted to each kind of work.

Wool is a delicate and sensitive material. It must be handled with skill and knowledge. It is affected by varying temperature and humidity. These must be closely watched. A slight adjustment of a machine may produce marked improvement in operation.

Continuous processes are not yet developed in textile work to the extent that they are in other industries. Overseers have still a great field of endeavor and reward in the invention and perfecting of labor-saving processes.

RAW MATERIAL AND WASTE.

It is equally uneconomical to use too good material or too poor material. The aim should be to use the cheapest material that will give the required production and quality with the least waste. In these days of higher speeds, bigger bobbins, larger shuttles and sheds, better raw material is required than in years gone by, and there can be no economy, with the present high costs of labor, in using wool that minimizes production and increases waste. On the other hand, there is no skill in using wool that is more costly than is needed to turn out the product in a satisfactory manner.

SUCCESSFUL MARKETING.

It may be questioned whether the overseer has anything to do with this particular problem, but a concern that accomplishes successful marketing must produce goods of the right kind and quality which must be well manufactured; and here the overseer can be very useful in informing the management regarding the capabilities of the machinery and the employes, and in working strenuously for an output that will do credit to his company when the goods reach the final consumer.

The efficient and ambitious overseer should endeavor to inform himself as much as possible regarding the branches of the business that are outside of his particular department. If he is a yarn spinner, for example, it is important that he should know something about designing, finishing and cost accounting. How often the question arises as to which department is to blame for faults that develop in the finished fabric! Is it stock, spinning, weaving or finishing which is at fault? The better informed an overseer is, the more valuable he is likely to become in managing his own department well and in adding to the general success of the concern.

AMERICANIZATION.

Immigration has been curtailed in order that Americanization can be improved. The overseer has a field for patriotic and philanthropic effort in overcoming prejudice, removing distrust, softening class antagonism, and creating sound ideas regarding individual opportunity and American standards of justice and freedom.

STANDARD WOOL GRADES.

On July first, the Secretary of Agriculture established and promulgated standard wool grades. Grades for wheat, cotton and some varieties of fruits and vegetables have been previously made standard. The Department, through the Bureau of Agricultural Economics, is actively engaged in the establishment of grade standards for tobacco, live stock and meats. Tentative grades have been prepared on these commodities and the investigations are now being conducted as to their general commercial practicability.

Authority is given the Secretary of Agriculture to establish and promulgate standards for agricultural products by the United States warehouse act, approved August 11, 1916, in Section 19 (39 United States Statutes at Large, pp. 446, 486); amended July 24, 1919, (41 United States Statutes at Large, pp. 234, 266), and amended February 23, 1923.

This section reads:

That the Secretary of Agriculture is authorized, from time to time, to establish and promulgate standards for agricultural products by which their quality or value may be judged or determined: Provided, That the standards for any agricultural products which have been, or which in future may be, established by or under authority of any other Act of Congress shall be, and are hereby, adopted for the purposes of this Act as the official standards of the United States for the agricultural products to which they relate.

The most urgent need of standards for grades of wool is to facilitate trading and to prevent rather than to arbitrate disagreements. The standard grades were chosen after a careful examination of samples

received from dealers and manufacturers. Each contributor was asked to send to the Bureau of Agricultural Economics samples which in his judgment should be classified under each of the seven divisions into which it was planned to divide wool fibers: namely, fine, $\frac{1}{2}$ blood, $\frac{3}{8}$ blood, $\frac{1}{4}$ blood, low $\frac{1}{4}$ blood, common and braid. Each contributor was also asked to separate each sample into 3 parts; high, medium and low. These samples were examined by experts and each division was again divided into a high, medium and low grade, making nine divisions of each sample. When each small division was arranged with the finer fibers at one end and the coarser at the other end, each two groups of fibers next in diameter size had margins of fibers which according to their diameter might be in either group. By superimposing the similar fibers of these consecutive divisions, the proposed standard grade, with the fibers arranged by diameters, was developed. By arranging the seven grades in the same manner, a standard exhibit of wool grades was formed. The division between the grades was drawn through the overlapping edges. Coarser fibers, of larger than a specified diameter are on one side and the finer, of a smaller diameter, are on the other side of this dividing line. Because of the relation between the length and diameter of wool fiber, the shorter ones are at the fine end of this scale and the longer ones at the coarser end.

This yard stick, as some have called it, with its seven units was submitted to wool producers, merchants and manufacturers. Subsequently conferences were held in Boston, Philadelphia and Chicago. After reviewing the criticisms from those to whom the proposed standards had been submitted and the suggestions offered at the meetings, a final conference, prior to the adoption of standards, was held in Washington on February 6, 1923. With the endorsement of this conference, these grades were presented to the Secretary of Agriculture for his acceptance and were by him declared the United States official wool grades.

This is but a step toward a comprehensive standard. Since these grades take into account only the diameter of fiber and at present are named according to American terms, further steps are necessary. The members of the Bureau of Agricultural Economics who have worked for the past five years upon the development of these standards, appreciate that we are dependent upon foreign markets for more than one half of our wool and that no standard is complete that does not take into account the unit of measure of this larger part of our wool consumption. Nothing that has already been done will prevent the association of English terms with those already attached to the standard scale. The study of the proper relation between the English counts and the American terms is to be the next step.

When other government standards were established, Congress made appropriations to provide for their adoption. Wool growers, merchants and manufacturers should unite in urging Congress to make a sufficient appropriation to continue the work in wool standards. Provision should be made to enable representatives of our government to confer with the British wool authorities to learn the specifications of the English count system in order that the British measure may be correctly associated with the American standard grades.

FRANCO-CANADIAN TRADE TREATY AND THE BRITISH PREFERENCE.

BESET by bad business conditions in domestic markets and large imports of French and Belgian manufactures, the anxiety of British wool manufacturers was increased within recent months by the Franco-Canadian reciprocal trade agreement signed in Paris on December 15, 1922.

If enacted into law, the agreement would seriously reduce the preference British goods receive when imported into Canada. Under the present regulations and agreements, woolen and worsted fabrics consigned from Great Britain to Canada have had a preferential rate of $27\frac{1}{2}$ per cent ad valorem, while similar goods from France have been dealt with under the intermediate tariff rate of 34 per cent ad valorem, thus giving the former a preference of $7\frac{1}{2}$ per cent.

Under the provision of the reciprocal agreement, a rebate of 15 per cent on the amount of the duty payable on any consignment was provided for. Put in concrete form, the duty on £100 worth of British wool fabrics entering Canada would be £27 10s, and on similar goods from France it would be £35, less 15 per cent of that duty, or £29 15s, reducing the British preference to 2.25 per cent, an amount so insignificant as to be wiped out by the advantage enjoyed by French exporters because of the depreciated value of the franc.

To British manufacturers and exporters, this Franco-Canadian agreement seemed to imperil the heretofore large exports sent from Britain to Canada, and the Secretary to the President of the Bradford Chamber of Commerce was delegated, before it was made a law, to make representations to the Canadian authorities concerning the injury feared from it. Because of these representations, it was hoped that whatever the fate of the French pact, the British advantage would be maintained at least at $7\frac{1}{2}$ per cent.

So well did he present his case that not only was the old preference saved, but an additional 10 per cent was obtained, an Ottawa despatch of June 18 stating that "while consideration was being given to the clause in the budget which gives an additional preference of 10 per cent to importations from Great Britain which come to this country direct through Canadian ports, a very exhaustive discussion of the situation of the wool manufacture of Canada took place." Opponents of the legislation painted a gloomy picture of conditions which followed the Government's grant of a 3 per cent increase in the British preference a year ago, and they predicted serious results to the Canadian industry and hardship to Canadian workers because of the proposed new increase in the preference.

Sir Henry Drayton, former Minister of Finance, declared that the cost of production had increased in Canada, that the yardage output of Canadian mills, which had been working only 30 per cent of their time, had decreased and importations had increased 54 per cent. With wages in Canada much higher than in England, he declared "it is not hard to realize the difficulties that our manufacturers have had to face." Nor is it a secret, he insisted, "why the Canadian woolen industry requires protec-

tion; the reason that those concerns are going out of business is simply that the protection has been cut down."

While Great Britain has secured additional preference, the clause giving it having been adopted, it has been at the expense of the Canadian industry. How long Canada will acquiesce in legislation which aids the industry of Britain and at the same time injures its own and does not reduce prices, remains to be seen. It will do so only so long as its legislators continue to prevent the country from becoming an industrial nation and until its people tire of raising raw materials for manufactures to be made in other countries and sent back to Canada for sale in competition with Canadian products.

The experience of Canada with this British preference is a shining example of the danger lurking in reciprocity agreements usually negotiated by men without industrial experience and with no concern for the country's industries or the unemployment resulting from the operation of the treaties.

THE ASSOCIATED UNDERWEAR MANUFACTURERS OPPOSE TEXTILE BRANDING BILLS.

At the annual meeting of the Associated Underwear Manufacturers of America at Hotel Traymore, Atlantic City, on May 14, 1923, Robert S. Cooper of the Cooper Underwear Company, chairman of a special committee to investigate the various so-called "Truth in Fabric" bills, reported that the committee was opposed to the bills. "After giving the matter consideration", the report stated, "the committee is convinced that the proposed legislation does not serve the public interest, because if written into law either by Congress or State Legislatures, it would not give the public the protection that they expect from it. In fact, it would remove present safeguards, which the public enjoy and substitute in their place an unsound standard of measuring values."

Arguments against the proposed legislation were set forth by the report as follows:

- I. It sets up false standards for judging quality of fabric.
 - (a) Reworked wool is better textile material than many types of "virgin" wool.
 - (b) Any standard of judging quality and value by the consumer must be in direct relation with the properties sought by him.
 - (c) Proposed bills would not let wool and reworked wool each stand on its own merits. It would put a premium on "virgin" wool fabrics and a stigma on mixed fabrics.
 - (d) There are essential differences between pure fabric and pure food laws.
- II. Some technical facts which the proposed labeling bill ignores are:
 - (a) Use of substitute in qualities with "virgin" wool is necessary.
 - (b) Reworked wool is employed chiefly in the manufacture of carded wools.
 - (c) The effect of the proposed law would be to enhance prices of "virgin" wool and to depress prices of reworked wool fabrics.
 - (d) Reworked wool is not a dishonest adulterant.

- (e) Reworked wools are now available at a great variety of prices, which closely follow the values of comparable grades of "virgin" wool.
- (f) The use of reworked wool has not been the cause of retarding wool growing in America. [United States]

III. The proposed law would add difficulties and cost to the manufacture and distribution of fabrics.

- (a) Reworked wool fabrics are now sold on their merits and at fair valuations.
- (b) Imitative competition by disreputable concerns would be likely.
- (c) Difficulties of branding.
- (d) Cost of marking.
- (e) Cost of registration and inspection.

In concluding the report, the committee said:

"In the opinion of your committee, the public recognizes that this legislation will not accomplish what it is proposed to accomplish; that it will be extremely difficult of administration and that it will establish false standards of values, which will react to the detriment of the public interest by removing safeguards now established in the reliance placed upon the advice and judgment of the local merchant and the responsibility of trade marked merchandise."

A "VIRGIN" WOOL LABEL MEANS BUT LITTLE.

It is a favorite pastime for the supporters of compulsory branding bills to assert, as the advertisement of a certain textile corporation does, that "those who fear to identify shoddy can sell it under the name of pure wool." "Even the most inferior shoddy", the advertisement continues, "may be pure wool, but only those whose fabrics are made of the genuine unused wool can truthfully use the term, virgin wool." Several important facts are carefully omitted from such assertions, which, if given, would show the purchaser attracted by such advertisements, that all so-called "virgin" wool is not of the same quality, and that merely marking the fabrics "made from virgin wool" would not help the uninformed customer.

With 640 different kinds of so-called "virgin" wool in the United States, as testified to before the Senate Sub-committee of the Committee on Interstate Commerce by Mr. Charles J. Webb, the Philadelphia wool merchant, what information as to the quality of the wool used in the making of a fabric or the yarns used in its construction would be given by the legend, "virgin wool"?

During the Government control of wool and its manufacture in Great Britain in wartime, the officials classified (as Colonel F. V. Willey, leading authority in the British wool trade, recently stated in a lecture) British wools into 200 classes, while for Australian clips the committee settled upon 860 different qualities. In New Zealand wools, about 300 different classes were determined.

With that condition of affairs, how, we ask again, will the branding of a fabric or a garment "made of virgin wool" convey to any person consider-

ing its purchase any reliable information as to its wearing qualities? With so many different qualities of so-called "virgin" wool (some good and others undesirable) available for use in the manufacture of fabrics, and with the Government's supposed hall mark of quality upon them, would there not be greater opportunities than were ever known, to use inferior wools, brand the fabrics made from those wools as the best, and deceive all except those with experience in wool manufacture and acquainted with its problems?

The mere enumeration of these many different qualities of so-called "virgin" wool shows the inherent weakness of this whole movement, ostensibly carried on to protect the purchaser of fabrics and garments, but really to increase the price of wools to their producers.

ATTENTION CALLED TO WEAK SPOTS IN THE FRENCH-CAPPER BILL.

At the recent semi-annual dinner of the Philadelphia Textile Manufacturers Association, Colonel Millard D. Brown of the Continental Mills, Incorporated, made an address on the French-Capper bill.

He declared that the appellation "Truth in Fabric" given to the bill is a misnomer which he said should be termed a "Bill to Encourage Falsehood in Fabric." "Should the bill become a law," he asserted, "the honest merchant, cutter or manufacturer will endeavor to mark his product in accordance with the law. The dishonest one will mark it to suit himself, and there is no known test that can be applied to prove that he has dishonestly marked his merchandise. The bill can not be enforced and will encourage and aid the dishonest manufacturer at the expense of the honest one. Some of the advocates of the bill will say—'Well, if necessary we can put inspectors in the mills.' Who is going to pay for these inspectors? Everyone who buys clothes. And I want to say that if there were inspectors in each woolen mill, nine-tenths of them would not know whether the goods were labeled right or not."

Touching upon the point that the woven wool manufacture is the only industry singled out to be made subject to the provisions of such legislation, Colonel Brown asked, "Why should there be compulsory labeling legislation in the woolen trade?" "Why should we not also", he asked, "have a Truth in Furniture bill, a Truth in Silk Hosiery bill, or a Truth in Jewelry bill? Why, indeed, should not the jewelry we buy be labeled with the amount of newly refined gold and remelted gold or silver it contains?" The reasons he gave are:

I. "A certain manufacturer who is an exceedingly shrewd advertiser would like to have his trademark contained in a title of a bill enacted by Congress. That would be worth thousands of dollars to him.

II. The wool grower, being an agriculturist, has a very strong bloc back of him, and he is using his influence with this bloc to enact legislation that will increase the price of his product at the expense of the dear consumer he is supposed to be protecting."

LUSTRE IN WOOL.

"LUSTRE!" says the *Launceston Australia Weekly Courier*, "is a term colloquially applied to almost every bright fleece which catches the eye of the critic. It is constantly mentioned in the description of back-country clips. Save in a few instances, none of them possesses it in the same degree as several high-class Victorian clips. Lustre is something more than brightness, and if any back-country flockmaster can lay claim to its possession, then some other word should be coined to meet these conditions. This peculiar characteristic first came under the notice of an intelligent studmaster in France in 1828, when a ram lamb was born in a flock of good merinos on the Mauchamp Farm. This animal was remarkable for its long, smooth, straight and silky wool. The proprietor of the farm established a breed of sheep from this ram which proved true to type, never showing any disposition to return to the character of the parent flock. The original ram and its immediate offspring were of small size, with large heads, narrow chests, and long flanks, but these blemishes were removed by judicious selection. This particular lustre variety came to be known as the Mauchamp merino. Strange to say, it came to light amongst the early Camden merinos in this country, and was finally taken in hand by one of the pioneers in Victoria, Mr. J. L. Currie, of Larra. From 1850 onwards lambs appeared at intervals in Mr. Currie's flock having fleeces of this peculiar nature. The wool was long in staple, straight, and of a delicate lustrous fibre. The appearance of the wool promoted the idea that the sheep were of a delicate constitution, and in the majority of cases where the peculiar character of the fleece, was distinctly marked the animal was rejected from the breeding flock as being apparently of too delicate a constitution to breed from. Again and again this peculiar type of sheep appeared in the flock, and at last, in 1867, a fine young ram was born, which possessed the peculiar character in such a marked degree that Mr. Currie was induced to take the matter into more serious consideration than he had hitherto done. The young ram was reserved, and a few ewes showing peculiar brightness of wool were selected in order to ascertain if the new type could be established. The result fully answered all expectations. When the silk character was manifest in the parents it was transmitted to the offspring, and the mating up of a silky ram with the selected ewes gave excellent results. London experts pronounced the wool which was thus bred to be the best sample that they had ever seen, and they declared that 'the peculiar straight, thin, silky fibre could not be too highly spoken of.' It was pronounced to be much more valuable than the ordinary merino wool, as it was peculiarly well suited for blending. None of the present generation of Victorian flockmasters has specialized in lustre fleeces, but odd instances of the type periodically crop up in almost any of the old-established flocks. There is not much evidence of it in the few relics of that portion of the illustrious Camden flock, which are still faithfully preserved, about 150 head in all, at the old home of the late Mr. Thomas Shaw."

BRADFORD EXPORTS OF WOOL AND WOOL MANUFACTURES COME IN LARGE QUANTITIES.

PROFESSOR J. LAWRENCE LAUGHLIN of the University of Chicago may denounce the Tariff Act of 1922 as a "tariff of exaggerations," but the fact remains, nevertheless, that under it enormous quantities of foreign imports are being brought into the country. It has not proved to be the insurmountable barrier our free trade friends asserted it would be. Certainly English wool manufacturers have not found it very difficult to find satisfactory outlets in these markets for wool and all kinds of wool manufactures. Returns of exports from the Bradford Consular district compiled by United States Consul Wallace J. Young for the months of February, March, and April, 1923, show very substantial values for the exports from that district to the United States which should cause those who, like Professor Laughlin denounce that Tariff law now in effect, to weigh their words carefully and not to indulge in sweeping generalizations unwarranted by the facts. The following table shows the values of the principal exports from Bradford for each of the three months named:

| | February, 1923. £ | March, 1923. £ | April, 1923. £ |
|------------------------|-------------------------|----------------------|----------------------|
| Wool..... | 326,318 | 332,345 | 267,644 |
| Noils and waste..... | 174,087 | 201,602 | 134,593 |
| Tops (wool)..... | 27,262 | 75,458 | 38,493 |
| Yarns (wool)..... | 16,374 | 19,294 | 19,377 |
| Mohair yarns..... | 81,636 | 92,267 | 74,211 |
| Worsted Cloths— | | | |
| Fancy..... | 45,400 | 38,869 | 22,918 |
| Plain..... | 5,932 | 7,613 | 6,158 |
| Woolen Cloths— | | | |
| Fancy..... | 35,325 | 55,648 | 44,597 |
| Plain..... | 1,293 | 1,000 | 2,245 |
| Coat linings..... | 16,543 | 33,052 | 18,033 |
| Other dress goods..... | 8,236 | 5,668 | 2,542 |
| Flannels (wool)..... | 2,268 | 1,513 | 1,000 |
| Totals..... | £740,674 | £864,329 | £631,811 |

The following table shows the value in round figures of the wool and wool manufactures exported to the United States in April, 1923, compared with the value for the same exports for the corresponding month in 1922.

Wools, hair of the camel, goat, alpaca, and other like animals—

| | £ | £ |
|---|----------|----------|
| Wool..... | 267,644 | 22,523 |
| Hair of the Angora goat, alpaca, etc..... | 26,604 | 15,006 |
| Wools, etc., manufactures of— | | |
| Noils and wastes..... | 134,593 | 51,454 |
| Tops, made wholly or in chief value of wool..... | 38,493 | 1,175 |
| Tops, made of the hair of the Angora goat, etc..... | 1,080 | 516 |
| Yarns made wholly or in chief value of wool..... | 19,377 | 9,737 |
| Yarns, made of the hair of the Angora goat, etc.. | 74,211 | 30,380 |
| Cloths made wholly or in chief value of wool— | | |
| Worsted, fancy woven..... | 22,918 | 12,409 |
| Worsted, plain..... | 6,158 | 5,281 |
| Woolen, fancy woven..... | 44,597 | 31,957 |
| Woolen, plain..... | 2,245 | 2,086 |
| Cloth made from the hair of the Angora goat, alpaca, etc..... | 18,059 | 7,940 |
| Dress goods, coat linings, etc.— | | |
| Coat linings..... | 18,033 | 5,379 |
| Other dress goods— | | |
| Cotton warp..... | 416 | 74 |
| All other..... | 2,126 | 520 |
| Flannels, wholly or in chief value of wool..... | 1,000 | 1,569 |
| Plushes made of the hair of the Angora goat, and manufactures of..... | 2,445 | 2,569 |
| All other manufactures wholly or in chief value of wool or hair..... | 4,934 | 4,117 |
| All other articles..... | 2,167 | 1,500 |
| Totals..... | £687,100 | £206,192 |

WOOL TEXTILE INDEX NUMBERS.

IN the appended table, published in the *Bradford Weekly Wool Chart*, are given index numbers of prices for wool, tops, and yarns based upon the level of July, 1914. The index number is compiled from monthly averages. The divergent courses followed by merinos and crossbred wool, tops, and yarns are also recorded, separate index numbers being given for those qualities.

The actual level of raw material values at the end of the month (as against the monthly average on which the table is based) was equivalent to an index number of 161, the highest point reached since the slump. The advance compared with July, 1914, however, was slightly less than the average advance in wholesale commodity prices.

| | Wool. | Tops. | Yarns. | Combined Average. | Wool | | Tops | | Yarns | |
|---------------|-------|-------|--------|----------------------|---------|------------|---------|------------|---------|------------|
| | | | | | Merino. | Crossbred. | Merino. | Crossbred. | Botany. | Crossbred. |
| 1914 | | | | | | | | | | |
| July..... | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| 1922 | | | | | | | | | | |
| January..... | 117 | 127 | 152 | 132 | 145 | 89 | 153 | 101 | 179 | 124 |
| February..... | 115 | 127 | 151 | 131 | 144 | 86 | 153 | 101 | 178 | 124 |
| March..... | 119 | 125 | 148 | 131 | 147 | 90 | 151 | 100 | 172 | 124 |
| April..... | 125 | 131 | 156 | 137 | 153 | 98 | 158 | 103 | 184 | 127 |
| May..... | 129 | 140 | 166 | 145 | 161 | 98 | 170 | 110 | 192 | 139 |
| June..... | 120 | 139 | 170 | 143 | 156 | 84 | 169 | 109 | 195 | 145 |
| July..... | 123 | 132 | 167 | 141 | 161 | 85 | 161 | 104 | 193 | 141 |
| August..... | 124 | 137 | 168 | 143 | 163 | 84 | 169 | 105 | 195 | 141 |
| September... | 131 | 143 | 168 | 147 | 171 | 91 | 178 | 108 | 197 | 139 |
| October..... | 146 | 148 | 179 | 158 | 182 | 109 | 184 | 112 | 214 | 145 |
| November... | 150 | 152 | 181 | 161 | 181 | 119 | 186 | 118 | 214 | 148 |
| December.... | 145 | 153 | 182 | 160 | 173 | 117 | 183 | 122 | 212 | 151 |
| 1923 | | | | | | | | | | |
| January..... | 155 | 159 | 186 | 167 | 180 | 130 | 189 | 129 | 214 | 158 |
| February.... | 145 | 157 | 186 | 163 | 171 | 118 | 186 | 128 | 213 | 159 |
| March..... | 146 | 153 | 182 | 160 | 173 | 119 | 181 | 125 | 209 | 155 |
| April..... | 155 | 158 | 183 | 165 | 181 | 129 | 186 | 129 | 209 | 157 |

WOOL PRICES OF 1899 AND THOSE OF 1923.

A correspondent of an Australian journal calls attention to the best prices secured for clips in the pre-war days of 1899, a year which was considered as a "boom" one. Prices then secured were regarded as phenomenal, and it was supposed by many that they would never be realized again. A comparison, however, with those realized in recent months shows to what extreme points current rates have ascended. In 1899 greasy merino wool sold up to 19½d. which was obtained for a single line during that season, whereas during the immediate past as much as 38½d. were obtained, and 30d. were paid for thousands of bales. In the 1899 boom, scoured merino touched 30½ d., which is now an average price for good, greasy merino. The annexed table shows the marked changes which have taken place:

| | 1899 1900 | 1922 1923 | | 1899 1900 | 1922 1923 |
|----------------------|--------------|--------------|---------------------|--------------|--------------|
| Greasy. | d. | d. | Scoured. | d. | d. |
| Merino fleece..... | 19½ | 38½ | Merino fleece..... | 30½ | 44¼ |
| Merino pieces..... | 16½ | 29½ | Merino pieces..... | 28¼ | 36¾ |
| Merino lambs..... | 15¼ | 27 | Merino bellies..... | 26¼ | 34½ |
| Merino necks..... | 15¼ | 30¼ | Merino lambs..... | 24¾ | 34½ |
| Merino bellies..... | 13 | 24½ | Merino locks..... | 22¼ | 28¾ |
| Crossbred fleece.... | 17¾ | 34¾ | Skin wool..... | 26 | 50 |
| Comeback fleece.... | 17¾ | 35 | Crossbred..... | 24 | 33¼ |
| Crossbred lambs.... | 13 | 20 | | | |

TREASURY RULING ON CARPET WOOL NOILS.

IN order to clarify a previous decision concerning carpet wool, a new ruling was made and issued by the Treasury Department on June 18, 1923, in which it was made clear that no allowance will be made for waste in estimating duty on noils not used in the making of floor coverings. It was as follows:

A question has arisen at one of the ports in connection with Section 7 of Treasury decision No. 39,513 of March 19, 1923, as to whether or not in distributing the duty to the tops and noils obtained from carpet wool imported under bond for use in the manufacture of carpet, a deduction should first be made of the duty attributable to the waste, that is, whether the duty to be distributed is the duty on the grease wool or on its clean content.

Section 7, above referred to, provides that:

"Credit for the noils shall not be made unless shown to have been used in the manufacture of floor coverings. If not so used, duty shall be assessed thereon on the following basis: The regular duty assessable on the wool in its condition as imported shall be distributed to the tops and noils according to their average relative values during the period of manufacture in which produced."

It will, therefore, be seen that no allowance for waste is contemplated unless the noils are used in the manufacture of carpet, and the duty to be distributed between the tops and noils is the total paid on the greasy wool without any deduction of the duty attributable to the waste. You will be governed accordingly.

CARPET WOOL IMPORT RULES AMENDED.

IN June, the customs division of the Treasury Department issued a ruling amending the customs regulations governing the importation of carpet wool by which under the provisions of Paragraph 1101 of the Fordney-McCumber Tariff act, Treasury decision 39,513 of March 19, 1923 is amended, so that only one term bond from each manufacturer is to be required. The amendment is as follows:

Only one term bond shall be required from each manufacturer, but if wool is withdrawn by him at ports other than that at which his bond is on file, a copy of the bond certified by the collector at the port where filed, shall be on file at such other ports and the collector at the port of withdrawal shall forward to the collector at the port where the bond is on file a certificate showing the particulars of importation of the wool withdrawn so that it may be charged against the bond of the party withdrawing same.

B. A. W. R. A. WOOL STOCKS

THE British-Australian Wool Realization Association, Ltd., have issued the following summary of total stocks and disposals of wool owned by the Association from December 31, 1922, to April 30, 1923:-

| Description. | Stock and Afloat Dec. 31, 1922 Bales. | Disposals to Apr. 30, 1923 Bales. | Stock and Afloat Apr. 30, 1923 Bales |
|-----------------------------------|--|--|---|
| AUSTRALIAN: | | | |
| Merino: | | | |
| Combing..... | 60,725 | 37,784 | 22,941 |
| Clothing..... | 5,779 | 4,861 | 918 |
| Carbonizing..... | 7,269 | 5,541 | 1,728 |
| Totals, Merino..... | 73,773 | 48,186 | 25,587 |
| Crossbred: | | | |
| Combing, fine 50/58/60's..... | 176,605 | 37,702 | 138,903 |
| Combing, med. 44/46's..... | 90,485 | 23,640 | 66,845 |
| Combing, low 40's and below..... | 35,209 | 8,819 | 26,390 |
| Clothing, fine 50/58/60's..... | 39,782 | 9,021 | 30,761 |
| Clothing, med. 44/46's..... | 19,995 | 3,875 | 16,120 |
| Clothing, low 40's and below..... | 10,418 | 2,143 | 8,275 |
| Carbong., fine, 50/58/60's..... | 62,747 | 12,026 | 50,721 |
| Carbong., med., 44/46's..... | 34,570 | 6,621 | 27,949 |
| Carbong., low 40's and below..... | 11,664 | 1,980 | 9,684 |
| Totals, Crossbred..... | 481,475 | 105,827 | 375,648 |
| Grand Totals, Australian..... | 555,248 | 154,013 | 401,235 |
| NEW ZEALAND: | | | |
| Merino..... | 2,465 | 1,165 | 1,300 |
| Crossbred (bulk combing): | | | |
| Fine, 56/58's..... | 9,687 | 3,683 | 6,004 |
| Med. 46/48/50's..... | 85,410 | 25,645 | 59,765 |
| Low 44's and below..... | 120,849 | 39,358 | 81,491 |
| Slipes..... | 72,560 | 27,399 | 45,161 |
| Scoured..... | 67,041 | 24,911 | 42,130 |
| Totals, New Zealand..... | 358,012 | 122,161 | 235,851 |
| Grand Totals..... | 913,260 | 276,174 | 637,086 |

Note—Of the stocks of wool shown above, one-half of the Australian wool and the whole of the New Zealand wool belongs to the British Government. The other half of the Australian wool belongs to the British Australian Wool Realization Association, Ltd.

Statistics for Second Quarter.

ACTIVE AND IDLE MACHINERY AS OF MAY 1 AND JUNE 1, 1923.¹

AS REPORTED BY THE BUREAU OF THE CENSUS, UNITED
STATES DEPARTMENT OF COMMERCE.

THE reports issued by the Bureau of the Census of the active and idle machinery in the wool manufacture as of May 1 and June 1 are herewith presented. Reports on active and idle machinery were begun by the National Association of Wool Manufacturers in December, 1913, and since that date they form a continuous record of the state of the industry. In November, 1918, the Bureau of Markets asked to take over the work, and later it was turned over to the Bureau of the Census, its first report being as of July 1, 1919.

The figures for the two months of the second quarter show a mixed result, although, on the whole, a slight recession from the activity of April was in evidence. In May, the percentage of active broad looms was 2 tenths per cent, and in the narrow looms 1 tenth per cent less than in April, while the carpet and rug looms were 1.1 per cent more active than the month previous. Woolen cards were 7 tenths per cent more active, although the woolen spinning spindles were 4 tenths per cent less active than in April. The activity of combs declined 1.8 per cent, although worsted spinning spindles were only 2 tenths per cent less active than in April.

Fifty-six fewer broad looms were on single shift than the previous month, and the number on double time was 45 less. On the contrary, 69 more narrow looms were working on single time, but there were 14 fewer on double time. While there were 183 more carpet looms on single time, there were 21 fewer on double time. The cards on single time increased 124 in the month, but those on double time decreased by 38. Combs on single time decreased by 22, and those on double time by 12. While the woolen spinning spindles on single time increased by 22,628, those on double time decreased by 18,891. The same was true of worsted spinning spindles which increased 6,521 on single time, but decreased 17,758 on double time.

When considering the active and idle machinery in percentage of total hours, maximum single shift capacity, the following facts appear: that the activity of the broad looms increased 1.8 per cent; the narrow looms, 7 tenths per cent, the carpet looms, 3.2 per cent; the cards decreased 25.9 per cent; the combs, 7.2 per cent; the woolen spinning spindles, 2.1 per cent, and the worsted spinning spindles 5.9 per cent.

(1) Do not include data for the Amoskeag Mfg. Co., Manchester, N. H.; John and James Dobson, Inc., Philadelphia, Pa.; Faulkner & Colony Mfg. Co., Keene, N. H.; Merrill Woolen Mills, Merrill, Wis., or Sheble and Kemp, Philadelphia, Pa.

462 NATIONAL ASSOCIATION OF WOOL MANUFACTURERS.

May 1, 1923.

Summary of Reports of 968 Manufacturers, Operating 1,146 Mills.

| | Looms | | | Sets of Cards | Combs | Spinning Spindles | |
|-------------------|-------------------------------------|----------------------------------|----------------------|---------------------|-------|-------------------|-----------|
| | Wider than 50 inch reed space | 50 inch reed space or less | Carpet and Rug | | | Woolen | Worsted |
| In operation..... | 52,508 | 14,536 | 7,785 | 6,281 | 2,277 | 2,041,665 | 2,331,893 |
| Idle..... | 8,083 | 2,533 | 1,253 | 658 | 256 | 227,588 | 141,171 |
| Total..... | 60,591 | 17,069 | 9,038 | 6,939 | 2,533 | 2,269,253 | 2,473,064 |

Note—All figures dated the first of the month cover the preceding month.

June 1, 1923.

Summary of Reports of 954 Manufacturers, Operating 1,135 Mills.

| | Looms | | | Sets of Cards | Combs | Spinning Spindles | |
|-------------------|-------------------------------------|----------------------------------|----------------------|---------------------|-------|-------------------|-----------|
| | Wider than 50 inch reed space | 50 inch reed space or less | Carpet and Rug | | | Woolen | Worsted |
| In operation..... | 52,407 | 14,591 | 7,947 | 6,367 | 2,243 | 2,045,402 | 2,320,656 |
| Idle..... | 8,146 | 2,513 | 1,163 | 615 | 303 | 237,526 | 145,020 |
| Total..... | 60,553 | 17,104 | 9,110 | 6,982 | 2,546 | 2,282,928 | 2,465,676 |

PERCENTAGES ARE BASED ON SINGLE SHIFT TIME.

Number of Machines in Operation Per Shift.

| | | | | | | | |
|-------------------|--------|--------|-------|-------|-------|-----------|-----------|
| June 1, 1923: | | | | | | | |
| Single shift..... | 48,492 | 14,445 | 7,699 | 5,403 | 1,517 | 1,786,714 | 2,088,563 |
| Double shift..... | 3,915 | 146 | 248 | 964 | 726 | 258,688 | 232,093 |
| May 1, 1923: | | | | | | | |
| Single shift..... | 48,548 | 14,376 | 7,516 | 5,279 | 1,539 | 1,764,086 | 2,082,042 |
| Double shift..... | 3,960 | 160 | 269 | 1,002 | 738 | 277,579 | 249,851 |
| April 1, 1923: | | | | | | | |
| Single shift..... | 48,101 | 14,565 | 7,645 | 5,274 | 1,559 | 1,773,532 | 2,051,782 |
| Double shift..... | 4,197 | 166 | 237 | 1,028 | 756 | 283,995 | 247,175 |
| Mar. 1, 1923: | | | | | | | |
| Single shift..... | 47,362 | 14,630 | 7,703 | 5,291 | 1,549 | 1,767,698 | 2,028,915 |
| Double shift..... | 3,950 | 166 | 236 | 905 | 690 | 238,662 | 230,501 |
| Feb. 1, 1923: | | | | | | | |
| Single shift..... | 47,576 | 14,656 | 7,677 | 5,194 | 1,575 | 1,717,557 | 2,056,204 |
| Double shift..... | 3,792 | 134 | 251 | 844 | 635 | 228,086 | 228,304 |
| Jan. 1, 1923: | | | | | | | |
| Single shift..... | 48,136 | 14,402 | 7,624 | 5,226 | 1,532 | 1,720,356 | 2,042,694 |
| Double shift..... | 3,486 | 96 | 215 | 768 | 658 | 235,390 | 215,121 |

Per Cent of Active and Idle Machines to Total Reported.

| | | | | | | | |
|----------------|------|------|------|------|------|------|------|
| June 1, 1923: | | | | | | | |
| Active..... | 86.5 | 85.3 | 87.2 | 91.2 | 88.1 | 89.6 | 94.1 |
| Idle..... | 13.5 | 14.7 | 12.8 | 8.8 | 11.9 | 10.4 | 5.9 |
| May 1, 1923: | | | | | | | |
| Active..... | 86.7 | 85.2 | 86.1 | 90.5 | 89.9 | 90.0 | 94.3 |
| Idle..... | 13.3 | 14.8 | 13.9 | 9.5 | 10.1 | 10.0 | 5.7 |
| April 1, 1923: | | | | | | | |
| Active..... | 86.3 | 86.1 | 86.6 | 90.7 | 91.4 | 90.0 | 93.7 |
| Idle..... | 13.7 | 13.9 | 13.4 | 9.3 | 8.6 | 10.0 | 6.3 |
| March 1, 1923: | | | | | | | |
| Active..... | 83.4 | 85.7 | 85.0 | 88.4 | 87.4 | 87.0 | 91.3 |
| Idle..... | 16.6 | 14.3 | 15.0 | 11.6 | 12.6 | 13.0 | 8.7 |
| Feb. 1, 1923: | | | | | | | |
| Active..... | 80.9 | 85.7 | 86.0 | 85.8 | 83.8 | 84.5 | 89.5 |
| Idle..... | 19.1 | 14.3 | 14.0 | 14.2 | 16.2 | 15.5 | 10.5 |
| Jan. 1, 1923: | | | | | | | |
| Active..... | 81.1 | 82.7 | 84.9 | 85.2 | 83.1 | 84.5 | 89.2 |
| Idle..... | 18.9 | 17.3 | 15.1 | 14.8 | 16.9 | 15.5 | 10.8 |

Active and Idle Machine and Spindle Hours.

| | Looms. | | | Sets of Cards. | Combs. | Spinning Spindles. | |
|----------------|---|-----------------------------------|-----------------------|----------------------|---------------|--------------------|---------------|
| | Wider than 50 inch reed space. | 50 inch reed space or less. | Carpet and rug. | | | Woolen. | Worsted. |
| June 1, 1923: | | | | | | | |
| Active..... | 11,819,798 | 3,142,085 | 1,742,059 | 1,567,112 | 611,216 | 502,084,168 | 541,713,250 |
| Idle..... | 1,127,799 | 580,763 | 291,104 | ₁₀ | ₁₁ | 304,960 | ₁₂ |
| May 1, 1923: | | | | | | | |
| Active..... | 11,052,061 | 2,984,045 | 1,588,398 | 1,871,103 | 621,265 | 488,547,742 | 577,196,105 |
| Idle..... | 1,299,647 | 580,405 | 337,292 | ₆ | ₇ | ₈ | ₉ |
| April 1, 1923: | | | | | | | |
| Active..... | 12,635,841 | 3,251,061 | 1,770,161 | 1,655,917 | 672,515 | 516,995,043 | 564,389,657 |
| Idle..... | 959,658 | 541,517 | 262,342 | ₃ | ₄ | 7,587,718 | ₅ |
| Mar. 1, 1923: | | | | | | | |
| Active..... | 9,711,297 | 2,568,005 | 1,540,787 | 1,387,527 | 472,818 | 445,675,961 | 467,490,099 |
| Idle..... | 2,469,988 | 886,723 | 341,273 | 72,832 | 33,932 | 25,204,849 | 20,720,783 |
| Feb. 1, 1923: | | | | | | | |
| Active..... | 11,865,287 | 3,233,402 | 1,795,526 | 1,491,727 | 588,472 | 463,898,355 | 528,877,935 |
| Idle..... | 1,814,868 | 627,533 | 284,036 | 76,965 | ₂ | 42,409,524 | 25,576,771 |
| Jan. 1, 1923: | | | | | | | |
| Active..... | 10,923,787 | 2,682,877 | 1,646,660 | 1,396,753 | 556,182 | 437,675,474 | 495,271,607 |
| Idle..... | 2,001,771 | 978,549 | 329,855 | 83,254 | ₁ | 45,746,943 | 7,215,583 |

Per Cent of Active and Idle Hours to Total Reported (Maximum Single Shift Capacity).

| | | | | | | | |
|----------------|------|------|------|---------------|------------------|--------------|---------------|
| June 1, 1923: | | | | | | | |
| Active..... | 91.3 | 84.4 | 85.7 | 101.4 | 112.6 | 99.9 | 103.6 |
| Idle..... | 8.7 | 15.6 | 14.3 | ¹⁰ | ¹¹ | 0.1 | ¹² |
| May 1, 1923: | | | | | | | |
| Active..... | 89.5 | 83.7 | 82.5 | 127.3 | 119.8 | 102.0 | 109.5 |
| Idle..... | 10.5 | 16.3 | 17.5 | ⁶ | ⁷ | ⁸ | ⁹ |
| April 1, 1923: | | | | | | | |
| Active..... | 92.9 | 85.7 | 87.1 | 103.9 | 117.2 | 98.6 | 102.1 |
| Idle..... | 7.1 | 14.3 | 12.9 | ³ | ⁴ | 1.4 | ⁵ |
| Mar. 1, 1923: | | | | | | | |
| Active..... | 79.7 | 74.3 | 81.9 | 95.0 | 93.3 | 94.6 | 95.8 |
| Idle..... | 20.3 | 25.7 | 18.1 | 5.0 | 6.7 | 5.4 | 4.2 |
| Feb. 1, 1923: | | | | | | | |
| Active..... | 86.7 | 83.7 | 86.3 | 95.1 | 103.0 | 91.6 | 95.4 |
| Idle..... | 13.3 | 16.3 | 13.7 | 4.9 | ... ² | 8.4 | 4.6 |
| Jan. 1, 1923: | | | | | | | |
| Active..... | 84.5 | 73.3 | 83.3 | 94.4 | 103.8 | 90.5 | 98.6 |
| Idle..... | 15.5 | 26.7 | 16.7 | 5.6 | ... ¹ | 9.5 | 1.4 |

¹ Overtime reported was sufficient to offset all idle hours and leave an excess of 20,427 hours, or 3.8 per cent.

² Overtime reported was sufficient to offset all idle hours and leave an excess of 16,994 hours, or 3.0 per cent.

³ Overtime reported was sufficient to offset all idle hours and leave an excess of 62,490 hours, or 3.9 per cent.

⁴ Overtime reported was sufficient to offset all idle hours and leave an excess of 98,726 hours, or 7.2 per cent.

⁵ Overtime reported was sufficient to offset all idle hours and leave an excess of 11,720,315 hours, or 2.1 per cent.

⁶ Overtime reported was sufficient to offset all idle hours and leave an excess of 401,418 hours, or 27.3 per cent.

⁷ Overtime reported was sufficient to offset all idle hours and leave an excess of 102,492 hours, or 19.8 per cent.

⁸ Overtime reported was sufficient to offset all idle hours and leave an excess of 9,696,295 hours, or 2.0 per cent.

⁹ Overtime reported was sufficient to offset all idle hours and leave an excess of 50,045,287 hours, or 9.5 per cent.

¹⁰ Overtime reported was sufficient to offset all idle hours and leave an excess of 21,998 hours, or 1.4 per cent.

¹¹ Overtime reported was sufficient to offset all idle hours and leave an excess of 68,448 hours, or 12.6 per cent.

¹² Overtime reported was sufficient to offset all idle hours and leave an excess of 18,588,721 hours, or 3.6 per cent.

WOOL CONSUMED BY MONTHS.

IN this Bulletin, which goes to press in July before the statement of consumption in June has been issued, are contained the reports of the quantity of wool consumed in the months of April and May only. It will be observed that the number of firms and corporations not reporting is growing almost steadily larger. In January, 616 manufacturers returned schedules; in February, 608; in March, 610; in April, 606, and in May, 603. With this diminishing number being returned, the percentage of unreported consumption necessarily must be increased, the original estimate of twenty per cent evidently being too small to account for those on the growing list of firms and corporations unrepresented in the schedules tabulated.

It should be noted also that the report of wool consumed by geographic sections gives a misleading idea, because many of the big corporations not reporting their consumption are in New England. As a result, both the total pound consumption and the percentage consumption are much too small for that section.

The consumption continues heavy, the increase from January to May, 1923, inclusive, being in grease equivalent 38,687,891 pounds larger than for the corresponding months of 1922; and that year's consumption was the largest in the country's history.

WOOL CONSUMED BY MONTHS.

APRIL, 1923.

Schedules returned by 606 manufacturers.¹

| | | Grease Equivalent. |
|----------------|-------------------|--------------------|
| In grease..... | 38,345,638 pounds | 38,345,638 pounds |
| Scoured..... | 7,393,911 " | 14,787,822 " |
| Pulled..... | 2,458,070 " | 3,277,427 " |
| Total..... | 48,197,619 " | 56,410,887 " |

(1) These figures do not include data for the American Woolen Company, Boston, Mass.; Amos Abbott Company, Dexter, Maine; Amoskeag Mfg. Company, Manchester, N. H.; Carolina Cotton & Woolen Mills Company, Spray, N. C.; Columbia Woolen Mills, Columbia City, Ind.; Crown Mills, Marcellus, N. Y.; Davisville Woolen Company, Davisville, R. I.; W. J. Dickey & Sons, Inc., Oella, Md.; Faulkner & Colony Mfg. Company, Keene, N. H.; Merrimack Woolen Corp., Lowell, Mass.; or Sheble & Kemp, Philadelphia, Pa.

MAY, 1923.

Schedules returned by 603 manufacturers.²

| | | Grease Equivalent. |
|----------------|-------------------|--------------------|
| In grease..... | 40,613,784 pounds | 40,613,784 pounds |
| Scoured..... | 7,521,786 " | 15,043,572 " |
| Pulled..... | 3,018,674 " | 4,024,898 " |
| Total..... | 51,154,244 " | 59,682,254 " |

(2) These returns do not include data for the American Woolen Company, Boston, Mass.; Amos Abbott Company, Dexter, Maine; Amoskeag Mfg. Company, Manchester, N. H.; Carolina Cotton & Woolen Mills Company, Spray, N. C.; Columbia Woolen Mills, Columbia City, Ind.; Crown Mills, Marcellus, N. Y.; Davisville Woolen Company, Davisville, R. I.; W. J. Dickey & Sons, Inc., Oella, Md.; Faulkner & Colony Mfg. Company, Keene, N. H.; Merrimack Woolen Corporation, Lowell, Mass.; or Sheble & Kemp, Philadelphia, Pa.

MONTHLY CONSUMPTION—GREASE EQUIVALENTS.

| Month. | 1922 | | 1923 | |
|---------------|------------------------|--|------------------------|--|
| | Consumption for Month. | Totals for Year to End of Month Indicated. | Consumption for Month. | Totals for Year to End of Month Indicated. |
| January..... | 52,280,000 | 52,280,000 | 63,348,352 | 63,348,352 |
| February..... | 53,774,000 | 106,054,000 | 57,916,339 | 121,264,691 |
| March..... | 60,368,000 | 166,422,000 | 62,859,150 | 184,123,841 |
| April..... | 42,574,000 | 208,996,000 | 56,410,887 | 240,534,728 |
| May..... | 52,533,091 | 261,529,091 | 59,682,254 | 300,216,982 |

In computing the grease equivalent one pound of scoured wool is considered equivalent to two pounds in the grease, and one pound of pulled wool equivalent to one and one-third pounds in the grease.

CONSUMPTION OF WOOL BY GEOGRAPHIC SECTIONS.

(All quantities in pounds).

April, 1923.

| Section. | Total. | Grease. | Scoured. | Pulled. | Grease Equivalent.† |
|----------------------|------------|------------|-----------|-----------|---------------------|
| Total..... | 48,197,619 | 38,345,638 | 7,393,911 | 2,458,070 | 56,410,887 |
| New England..... | 24,868,172 | 19,843,075 | 4,101,266 | 923,831 | 29,277,382 |
| Middle Atlantic..... | 20,621,091 | 17,389,203 | 1,884,435 | 1,347,453 | 22,954,677 |
| Pacific Coast..... | 498,606 | 226,908 | 253,113 | 18,585 | 757,914 |
| Other sections..... | 2,209,750 | 886,452 | 1,155,097 | 168,201 | 3,420,914 |

May, 1923.

| Section. | Total. | Grease. | Scoured. | Pulled. | Grease Equivalent.† |
|----------------------|------------|------------|-----------|-----------|---------------------|
| Total..... | 51,154,244 | 40,613,784 | 7,521,786 | 3,018,674 | 59,682,254 |
| New England..... | 26,217,674 | 20,624,281 | 4,321,611 | 1,271,782 | 30,963,212 |
| Middle Atlantic..... | 20,740,909 | 17,718,013 | 1,605,090 | 1,417,806 | 22,818,601 |
| Pacific Coast..... | 520,212 | 171,239 | 322,119 | 26,854 | 5,049,159 |
| Other Sections..... | 3,675,449 | 2,100,251 | 1,272,966 | 302,232 | 851,282 |

†In computing the grease equivalent, 1 pound of scoured wool is considered equivalent to 2 pounds in the grease; and 1 pound of pulled, to 1½ pounds in the grease.

QUARTERLY REPORT OF THE BOSTON WOOL MARKET FOR
APRIL, MAY, JUNE, 1923, AND JUNE, 1922.

DOMESTIC WOOLS. (F. NATHANIEL PERKINS.)

| | 1923. | | | 1922. |
|--|---------------|---------------|---------------|---------------|
| | April | May | June | June |
| OHIO, PENNSYLVANIA, AND WEST VIRGINIA. | | | | |
| (UNWASHED.) | <i>Cents.</i> | <i>Cents.</i> | <i>Cents.</i> | <i>Cents.</i> |
| Fine..... | 54 | 54 | 52 | 40 @ 48 |
| $\frac{1}{2}$ Blood..... | 57 | 58 | 57 | 45 @ 51 |
| $\frac{3}{8}$ "..... | 56 | 57 | 56 | 41 @ 48 |
| $\frac{1}{4}$ "..... | 52 | 54 | 53 | 43 @ 48 |
| Fine Delaine..... | 57 | 58 | 56 | 50 @ 58 |
| MICHIGAN, WISCONSIN, NEW YORK, ETC. | | | | |
| (UNWASHED.) | | | | |
| Fine..... | 49 | 49 | 49 | 38 @ 44 |
| $\frac{1}{2}$ Blood..... | 54 | 54 | 54 | 43 @ 48 |
| $\frac{3}{8}$ "..... | 54 @ 55 | 54 @ 55 | 54 @ 55 | 40 @ 46 |
| $\frac{1}{4}$ "..... | 51 | 51 @ 52 | 51 | 38 @ 44 |
| Fine Delaine..... | 55 | 55 @ 56 | 55 @ 56 | 47 @ 54 |
| KENTUCKY AND INDIANA. | | | | |
| (UNWASHED.) | | | | |
| $\frac{3}{8}$ Blood..... | 58 @ 59 | 58 @ 59 | 57 @ 58 | 43 @ 49 |
| $\frac{1}{4}$ "..... | 55 @ 57 | 55 @ 57 | 54 @ 56 | 41 @ 46 |
| Braid..... | 38 @ 39 | 38 @ 39 | 36 @ 38 | 32 @ 36 |
| MISSOURI, IOWA AND ILLINOIS. | | | | |
| (UNWASHED.) | | | | |
| $\frac{3}{8}$ Blood..... | 55 | 55 @ 56 | 54 @ 55 | 40 @ 46 |
| $\frac{1}{4}$ "..... | 51 | 51 @ 52 | 50 @ 51 | 38 @ 44 |
| Braid..... | 36 @ 38 | 36 @ 38 | 35 @ 37 | 33 @ 35 |
| TEXAS. | | | | |
| (SCOURD BASIS.) | | | | |
| 12 mos., fine and fine medium..... | 140 | 145 | 140 | 125 @ 135 |
| Spring, fine and fine medium..... | 130 | 130 @ 135 | 125 | 110 @ 120 |
| Fall, fine and fine medium..... | 120 | 120 | 115 @ 120 | 100 @ 105 |
| CALIFORNIA. | | | | |
| (SCOURD BASIS.) | | | | |
| 12 months, fine..... | 140 | 140 | 135 | 125 @ 135 |
| Spring, fine..... | 120 | 125 | 120 | 120 @ 125 |
| Fall, fine..... | 110 | 110 | 105 | 100 @ 105 |
| TERRITORY WOOL: MONT., WYO., UTAH, IDA., OREGON, ETC. | | | | |
| (SCOURD BASIS.) | | | | |
| Staple, fine and fine medium..... | 145 | 150 | 145 | 135 @ 140 |
| Clothing, fine and fine medium..... | 125 | 125 | 120 | 120 @ 125 |
| $\frac{1}{2}$ Blood..... | 125 | 135 | 133 | 110 @ 115 |
| $\frac{3}{8}$ "..... | 120 | 115 | 105 @ 110 | 90 |
| $\frac{1}{4}$ "..... | 100 | 100 | 90 @ 95 | 80 |
| NEW MEXICO. | | | | |
| (SCOURD BASIS.) | | | | |
| No. 1..... | 135 | 130 | 130 | 110 @ 120 |
| No. 2..... | 115 | 115 | 115 | 90 @ 100 |
| No. 3..... | 85 | 85 | 85 | 65 @ 75 |
| GEORGIA AND SOUTHERN. | | | | |
| (UNWASHED.)..... | 45 @ 47 | 51 @ 53 | 48 @ 50 | 33 @ 40 |

DOMESTIC WOOLS.

THE second quarter of the year opened with rather active buying in Arizona, Nevada, Utah, and California at stiff prices, especially on desirable fine wools. Wools of worsted description were chiefly in demand, the woolen mill buying not being so much in evidence.

Early in April purchases in Texas of choice twelve months wools were at full prices. The firm opening of the London and Australian sales the latter part of April helped to give a better tone to the domestic wool market.

May opened with a strong active market in practically all markets except in Boston. In Utah, Arizona and Texas somewhat active buying continued. During May the exportation of medium low wools, mostly South American crossbreds, developed to some extent.

The infrequent visits of manufacturers to the Boston market curtailed the disposals of wool. The quietness of trade in Boston was reflected in all wool producing centers of the country, buyers reducing their limits or retiring from the field. The wool growers not being able to obtain expected prices caused considerable quantities of wool to move on consignment. In view of the continued curtailment of orders from manufacturers, the year 1923 may develop into a year of consignments.

The quarter closed with the usual seasonable influences creating a quiet, listless market. With the attention of the wool merchants and wool manufacturers centered on the coming light weight season, and with everyone who wishes to work, working at wages but little below the war time peak, the absorptive power of the country is very great, and this will undoubtedly prove a potent factor in bringing about in due season a normal and healthy movement of wool and wool products.

F. NATHANIEL PERKINS.

Boston, Mass.

July 6, 1923.

PULLED WOOLS. (W. A. BLANCHARD.)

| | 1923. | | | 1922. |
|------------------------|--------------|--------------|--------------|--------------|
| | April | May | June | June |
| | <i>Cents</i> | <i>Cents</i> | <i>Cents</i> | <i>Cents</i> |
| Extra, and Fine A..... | 125 @ 140 | 120 @ 135 | 120 @ 135 | 110 @ 120 |
| A Super..... | 110 @ 115 | 105 @ 110 | 100 @ 105 | 95 @ 105 |
| B Super..... | 90 @ 95 | 85 @ 95 | 85 @ 90 | 85 @ 95 |
| C Super..... | 60 @ 70 | 55 @ 65 | 55 @ 60 | 55 @ 65 |
| Fine Combing..... | 110 @ 120 | 110 @ 120 | 105 @ 115 | 95 @ 105 |
| Medium Combing..... | 95 @ 105 | 95 @ 105 | 90 @ 100 | 75 @ 85 |
| Low Combing..... | 75 @ 85 | 75 @ 85 | 75 @ 80 | 60 @ 70 |

PULLED WOOLS.

BUSINESS for the quarter has shown a gradual curtailment in volume and a decline in prices. Buying has been confined to manufacturers and to immediate requirements. Dealers have found the course of the market exceedingly disappointing and after effecting sales refrained from replenishing stocks. The production of staple wools ceased at the close of May and subsequent quotations are nominal. June lambs are never an especial feature of the year's business, but the limited amount pulled met with a fair demand on a clean basis of 85 cents. The price of pelts has ruled high and pullers have had to depend for their profits on what they could realize from their sales of slats.

Although hard pushed by foreign pulled wools, of which there have been heavy importations, the domestic product has more than held its own even on a considerably higher level of values.

W. A. BLANCHARD.

Boston, Mass.,
July 3, 1923.

FOREIGN WOOLS—(BIGELOW, REED & Co., INC.)
Scoured Basis, 1923.

| | 1923. | | | 1922. |
|-------------------------------------|---------------|---------------|---------------|---------------|
| | April | May | June | June |
| | <i>Cents.</i> | <i>Cents.</i> | <i>Cents.</i> | <i>Cents.</i> |
| Australian Combing: | | | | |
| Choice..... | 155 | 155 | 152 | 155 |
| Good..... | 145 | 145 | 143 | 135 |
| Average..... | 140 | 140 | 138 | 125 |
| Australian Clothing: | | | | |
| Choice..... | 155 | 155 | 152 | 155 |
| Good..... | 145 | 145 | 143 | 135 |
| Average..... | 140 | 140 | 140 | 120 |
| Sydney and Queensland: | | | | |
| Good Clothing..... | 145 | 145 | 143 | 135 |
| Good Combing..... | 145 | 145 | 143 | 135 |
| Australian Crossbred: | | | | |
| Choice..... | 65 @ 110 | 65 @ 110 | 65 @ 110 | 45 @ 80 |
| Average..... | 55 @ 95 | 55 @ 95 | 55 @ 95 | 40 @ 70 |
| Australian Lambs: | | | | |
| Choice..... | 150 | 150 | 145 | 175 |
| Good..... | 135 | 130 | 125 | 140 |
| Good Defective..... | 125 | 122 | 120 | 135 |
| Cape of Good Hope: | | | | |
| Choice..... | 150 | 150 | 145 | 155 |
| Average..... | 140 | 140 | 138 | 120 |
| Montevideo: | | | | |
| Choice..... | 140 | 140 | 140 | 130 |
| Average..... | 135 | 135 | 135 | 110 |
| Crossbred, Choice..... | 100 | 100 | 100 | 75 |
| English Wools: | | | | |
| Sussex Fleece..... | 102 | 102 | 102 | ..... |
| Shropshire Hogs (pick)..... | 95 | 95 | 95 | ..... |
| Yorkshire Hogs..... | 70 | 70 | 70 | ..... |
| Irish Selected Fleece..... | 64 | 64 | 64 | ..... |
| Carpet Wools: | | | | |
| Scotch Highland, White (in bond)... | 30 | 30 | 30 | 23 @ 25 |
| East India, 1st White Joria..... | 65 | 64 | 63 | 55 @ 58 |
| East India, White Kandahar..... | 60 | 55 | 55 | 45 @ 48 |
| Donskoi, Washed, White..... | ..... | ..... | ..... | ..... |
| Aleppo, White..... | 43 | 43 | 43 | 35 @ 40 |
| China Ball, No. 1..... | 80 | 78 @ 80 | 73 @ 80 | 52 @ 60 |
| China No. 1, Sining (in bond)..... | 43 | 43 | 42 | ..... |

FOREIGN WOOLS.

For the last three months, more particularly since the middle of May, a very limited buying power has existed in the Boston market for foreign wools.

At the Liverpool Sales on June 14, merino wools showed a decline from the previous London values of 5 per cent, and at the London Sales opening June 26, they were on a par with the prices paid at Liverpool. Continental and Japanese buyers were the chief operators, Bradford and United States buyers doing practically nothing.

Stocks of foreign merino wools in the Boston market are very limited. Crossbred, chiefly South American wools, are in plentiful supply.

Prices for East India wools have declined abroad, but other carpet wools have shown little change.

BIGELOW, REED & Co., INC.

Boston, Mass.

July 2, 1923.

BOSTON RECEIPTS OF WOOL, FOREIGN AND DOMESTIC,
BY MONTHS.

Compiled from figures reported by the Boston Chamber of Commerce.

| | Domestic. | | Foreign. | |
|----------------------------|---------------|----------------|---------------|----------------|
| | <i>Bales.</i> | <i>Pounds.</i> | <i>Bales.</i> | <i>Pounds.</i> |
| January, 1923..... | 28,218 | 6,726,900 | 67,273 | 39,066,000 |
| January, 1922..... | 68,968 | 13,824,500 | 23,522 | 13,060,500 |
| February, 1923..... | 21,260 | 5,989,900 | 92,147 | 40,885,000 |
| February, 1922..... | 64,211 | 13,407,300 | 21,424 | 11,838,800 |
| March, 1923..... | 36,880 | 9,337,200 | 99,529 | 55,200,000 |
| March, 1922..... | 43,371 | 10,899,100 | 49,352 | 29,046,600 |
| April, 1923..... | 33,189 | 7,109,200 | 92,425 | 45,476,900 |
| April, 1922..... | 36,293 | 9,654,500 | 56,677 | 24,538,700 |
| May, 1923..... | 41,972 | 10,586,400 | 89,384 | 42,796,900 |
| May, 1922..... | 66,453 | 16,717,400 | 52,016 | 24,255,000 |
| June, 1923..... | 88,534 | 22,144,300 | 57,357 | 22,258,800 |
| June, 1922..... | 110,082 | 29,277,900 | 17,603 | 7,377,600 |
| Since January 1, 1923..... | 250,053 | 61,893,900 | 498,115 | 245,683,600 |
| Since January 1, 1922..... | 389,378 | 93,780,700 | 220,594 | 110,117,200 |

BULLETIN
OF THE
National Association of Wool Manufacturers
A QUARTERLY MAGAZINE
DEVOTED TO THE INTERESTS OF THE NATIONAL WOOL INDUSTRY

VOL. LIII.]

BOSTON, OCTOBER 1923.

[No. 4.

CIVILIZATION AND CLIMATE.

"Civilization and Climate"—by Ellsworth Huntington, M. A., Ph. D., Professor of Geography and Research Associate, Yale University, Published by Yale University Press, 1915.

WHEN the supply of labor is plentiful enough to permit the selection of operatives, is the climate of the workers' countries compared with that of the mill town? Are there frequent changes of weather, and great or small ranges of temperature in their countries? Are the periods of greatest activity in our mills nearly coincident with the months of the year when manual and mental effort is greatest? In what countries may competition be expected? If a mill is to be moved to another district, is the climate of the new site compared with that of the present one? Until one's attention has been called to a scientific study of these questions, they may seem irrelevant to the manufacturer.

Two large centers of wool manufacture are Great Britain and the northeastern corner of the United States. An eminent scientist declares that at present the climate of these two places is most stimulating and that they likewise possess the highest type of civilization. Where else are these factors as helpful for industry? Why have civilizations of the past disappeared? Can man, by the study of climate, find means to combat the disadvantages that exist in places? These are problems discussed in Professor Huntington's "Civilization and Climate", which merits a careful study by leaders of industry

Professor Huntington's book, divided, as it were, into three parts, contains a qualitative study of facts so well

known that they are not reasonably open to question, quantitative measurements which, if examined by many, will result in the same conclusions, and, thirdly, a review of ancient civilizations with the setting up of their probable climatic conditions. In this third and concluding part the climatic hypothesis of civilization is presented.

RACE AND PLACE, FACTORS OF CIVILIZATION.

In the qualitative study two fundamental factors, race and place, are discussed. Differences between races are exemplified by studies of the Teutons and the negroes. In the United States white farmers, by several comparisons of Census statistics, exceed negro farmers in efficiency. In educational tests white pupils surpass colored pupils. In measurements of other activities the same relation is found. A comparison between the negro farmer of the north and south shows that the former is more successful; likewise, the northern white farmer excels the southern white farmer.

As an example of the effect of race being overcome by place, Professor Huntington refers to the migration of loyalists from Georgia both to Canada, where their descendants are leaders, and to the Bahamas, where their descendants have dropped toward the type of the "poor white". A further example is afforded (by the whites) in South Africa, who deteriorate as they go north from the most southern settlements, while the colored people, as they move southward from their homes near the tropics, improve.

In his chapter upon the effects of the season, the author speaks of the varying opinions of people of good judgment concerning the effect of clear days, which are both psychological and physiological, general opinion showing consciousness of the effect of clear days but not of cloudy ones. There are certain effects of light, of altitude, and of winds discussed in this qualitative analysis. Concerning the influence of temperature, it is the common belief that one works faster in winter in the northeastern part of the United States than at other times, yet statistics of 10,000 people prove to the contrary.

After reviewing these qualitative estimates of climatic effects Dr. Huntington states that we need to determine by

investigation how ordinary people are influenced by ordinary conditions of weather. The second part of his study, the quantitative analysis, begins at this point.

INFLUENCE OF SEASONS ON PHYSICAL WORK.

Records for research were collected in three Connecticut factories where the workers were paid by the piece, not at a fixed rate per day; their output was limited neither by restrictions imposed by labor organizations nor by fear of reduced wages if the output became too great. The records of the 300 men and 250 girls, which were kept accurately daily, were for the same kind of work, for the same employes, for every day, month after month, for four years, 1910-1913. There was an apparent incentive to steady and faithful labor, the light, air, and other working conditions being reasonably good. The tasks in the three factories ranged from the hardest to the lightest, requiring varying degrees of strength and skill. The wages, depending not only upon the quantity produced but upon the amount accepted, were comparable in the case of men and women since, for the research, they were changed into percentages.

Under what conditions and how the data were accumulated and submitted to the usual mathematical corrections, imposed upon the records of the astronomical observatory and physical laboratory, is minutely told in this volume and gives basis for confidence in this study of the influence of climatic factors. After reviewing the measurements of output the officers and superintendents of the factories were consulted to learn if there were any internal causes for certain conspicuous peaks in the November and January records. There appeared a similarity among the curves for the four separate years in that a minimum rate of production is apparent in the first part of the year with an increasing rate until about June, when it diminishes to midsummer changing until a maximum is reached about November first.

These results are compared with physiological measurements, with certain vital statistics and production records of other communities. Curves of all these data harmonize, comparison showing similar points but at slightly different positions, varying, it is explained, because of different climatic

conditions, all suggesting, however, a similar variation of physical strength and health in accordance with the season.

MENTAL ACTIVITY VARIES BY SEASONS.

The author next shows, by presenting curves made from class records, at Annapolis and West Point that mental activity also varies by seasons. The curves resemble those for manual work in having two main high points in fall and spring, nearer the cold weather, with two low points in mid-winter and mid-summer. Professor Huntington concludes that the consistence of the results is most important since it points to the belief that in all parts of the world the climate is exercising an influence which can readily be measured and can be subjected to statistical analysis.

Following a discussion of the effect of climatic elements, such as temperature and pressure, upon mental and manual effort the conclusion is reached that the dampest days in winter are the times of greatest efficiency. In spring and fall the curve of production is highest with a relative humidity of about 75 per cent, while the record for summer is best when the relative humidity is 65 per cent. The curve distinctly points to a marked diminution of production as the air becomes dryer. In the graphic comparison of the average work of the Connecticut factory hands for four consecutive years with the mean temperature for the same period, both curves are low in winter and rise together until June, when that for work declines as the temperature rises above 68 degrees; when it ceases to rise, the work curve stops falling, remaining nearly steady through July until the mean temperature has dropped to about 71. At this point the work curve goes up again until about the first of November, when the mean temperature is 48 degrees; in the following cooler period it descends, reaching its minimum near the end of January. In the comparison of these charts with those made from the study of the growth of plants, under varying temperatures, those for mental and physical work of humans are interestingly similar.

For physical work the best temperature is from 59 to 65 degrees, but for mental activity it is about 40. The point of greatest effectiveness rises as one goes south but not at

the rate of the difference in temperature. If the temperature increases beyond the optimum, the point of greatest output, the loss in mental activity is greater than that of manual labor.

EFFECT OF FREQUENT CHANGES OF WEATHER.

The effects of frequent changes of climatic elements from day to day, the weather, are significant, being reviewed qualitatively by exaggerated instances and then quantitatively by records of piece work of many workers. Professor Huntington concludes from this study:

Taking the year as a whole, uniformity of temperature causes low energy; a slight rise is beneficial, but a further rise is of no particular value; the beginning of a fall of mean temperature is harmful, but when the fall becomes a little larger, it is much more stimulating than a rise; when it becomes extreme, however, its beneficial qualities begin to decline. This conclusion must, of course, be appropriately modified according to the season. A cold wave in January is very different from one in July. In our curves we have given January and July an opportunity to neutralize one another. They have not done so. This means that after all allowances have been made for the seasons, the total effect of cold waves is decidedly beneficial, and of warm waves slightly so. Frequent changes, therefore, are highly desirable.

Since temperature changes are not the only climatic elements which influence man's work, the records for the different kinds of days in the series which accompany the frequent changes of weather of New England are plotted separately. It is evident from this that the least work is accomplished on clear days in spite of the apparent stimulation which is psychological rather than physical. The curves are highest for the second and succeeding cloudy days, people working fastest at the end of a storm, each being a stimulant. It is the passing of cyclonic storms, with or without rain, which produces the change from clear to cloudy weather and the accompanying changes of temperature.

On the basis of his experiments Professor Huntington, in his chapter upon the ideal climate for maximum manual and mental work, finds that the best is apparently one in which the mean temperature never falls below the mental optimum of 38 degrees or rises above the physical optimum of 60 or

possibly 65 degrees. A study of the records shows that the change of temperature is more important than relative humidity, its effect on human activity being second only to that of the mean temperature of the seasons. There are regions where this particularly favorable condition prevails, but among these there are many whose general climatic conditions are decidedly unfavorable because the effect of pronounced changes of temperature from day to day is often nullified by great heat in summer and extreme cold in winter. Further, the seasonal range forms only one of the two factors determining the amount of stimulation derived from the daily changes. The other factor is the number of cyclonic storms producing changes of weather from day to day, as in the United States and Europe.

MAP OF CLIMATE SHOWING HUMAN ENERGY.

Professor Huntington draws a map of climate by using the product of the mean temperature for every month for about 1100 stations and the mental and physical efficiency at these temperatures, taken from his own curves; the results are weighted also to take into account the range of temperature and amount of storminess. He presents this map divided into five grades, shaded from the very high to the very low areas, as a first approximation. It gives two very high areas, one including Great Britain and Ireland and the western part of Europe, the other the north and northeastern part of the United States with the contiguous portion of Canada. One high area includes Japan and extends into Korea, a second lies chiefly in New Zealand but extends into Australia, a third is located in the southern part of South America, a fourth lies along the Pacific Coast of North America.

On these maps human energy in the far north appears to decline rapidly. At the other extreme of climate, the region within 30 degrees of the equator is characterized, as expected, by lack of energy. It is further shown that this rate diminishes as one passes east from western Europe to Central Asia; the Baltic provinces are reasonably good, while China has a low rating.

In his chapter on the distribution of civilization the author presents the striking resemblance between the distribution

of climatic energy and civilization. While he is able to construct the map of climate from statistics, he fails to find a type, common to all countries, reliable enough to form the basis of a map showing the distribution of civilization. He, therefore, draws one founded upon the judgment of numerous business men, colonial officials, diplomats, editors, educators, ethnologists, geographers, missionaries, and travellers to whom he wrote.

DISTRIBUTION OF CIVILIZATION.

Those invited to make these estimates were requested to mark each of the two hundred places on a scale of one to ten, each region being rated according to differing factors of civilization. The estimates of the quality of civilization of the various districts were averaged and recorded upon maps with lines enclosing places of similar standing, ranges of grade being selected to give six different qualities. The result compared most interestingly with the climate map. For further comparison, in an attempt to develop civilization maps of the United States based upon statistical information, data were used from certain vital and educational statistics.

Professor Huntington's discussion of these maps merits a close study. They simply give expression, he states, to two distinct sets of facts: first, that the opinions of men of many races agree to the general distribution of civilization, and, second, that if the various conditions of climate produce the same effect upon all people of the world as upon students and factory operatives in the eastern United States, the amount of work accomplished in different countries will be closely proportionate to the status of civilization.

In closing the chapter upon the distribution of civilization the author writes, following the explanation of the map of ability:

Taken as a whole the map of ability is an admirable example of the way in which a variety of factors co-operate in determining the status of civilization. Climate, as it were, paints a broad background shading gradually from very high in certain areas to lower in others. Then the other factors come into play. They paint fresh colors which may or may not resemble those of climate. In some cases, such as Massachusetts, the same color is laid on by climate, hered-

ity, and opportunity, not to mention proximity to the sea and to Europe, facilities for manufacturing, and various other factors which perhaps may be considered as opportunities. Where that happens, high civilization is sure to prevail. In other cases, such as South Carolina, the climate paints only a moderately high color, inheritance paints a higher one, education a low, the presence of the negroes a still lower, and so on indefinitely.

Such, then, is the meaning of our maps. They do not indicate that climate is the only factor in determining the condition of civilization, or even the main one. Far from it. Yet they indicate that it is as essential as any other. Today civilization seems to make great progress only where a stimulating climate exists. A high civilization may be carried from such places to others, but it makes a vigorous growth and is fruitful in new ideas only where the climate gives men energy.

To one who is interested in the development of Professor Huntington's book up to this point it may occur that while his maps of climate and civilization conform to one's expectations, how did great civilizations exist in places where the climatic conditions appear not to be conducive, according to this theory, to the maintenance of high forms of civilization? In answer, evidence of climatic instability is offered.

CHANGES IN CLIMATE.

Glacial periods of at least four epochs existed, we are told, separated by interglacial epochs when the climate was as mild as at present, or milder. Geologists almost universally conclude that during the hundreds of millions of years forming geological time the climate of the earth pulsated back and forth. Ice existed within 30 degrees of the equator and at other times tropical conditions prevailed as far north as Greenland. There is evidence that following the last ice age the melting of ice did not take place steadily. Several times the climate became milder, remained nearly uniform for awhile, or reverted to temperatures permitting glaciation.

There are evidences of changes in the amount of moisture. Salt lakes of arid regions are satisfactory rain gauges since about such lakes there exist old strands indicating varying heights due to change of climatic conditions. In many parts of Asia, Africa and America ruins of towns and cities are located where now the supply of water seems utterly inadequate. Traces of dry springs are seen. Bridges span

channels which carry no water for years at a time. These and many others are almost irrefutable testimony that at sometime the climate in these places was moister than now. On the other hand, the fact that there are ruins located on floors of lakes, which must have been partially dry when structures were erected, and that there are irrigation canals in places that are now so damp that their construction would seem to be a waste of energy, is evidence that other places were dryer than at present. Archaeology records periods of greater or less moisture.

CALIFORNIA TREES RECORD RAINFALL FOR CENTURIES.

Professor A. E. Douglas, in his study of the thickness of annual rings of about 450 sequoia trees of ages ranging from 250 to nearly 3,250 years, presents reliable indications of varying rain falls. He superimposes a curve, from archaeological records, showing greater or less moisture, upon the curve of relative rain fall obtained by the examination of the trees of California, and the two concur. Dates of rainy years have been calculated from the careful analyses of the waters of lakes, without outlet, and rivers, flowing into them, agreeing with those determined by the rings of the sequoia trees. Further, the character of the former lake beaches and the rings of the California trees show periods of storminess which occurred simultaneously in France, Holland and Lincolnshire all about 1350 A. D. In central Asia, the Caspian Sea and Lake of Lop Nor both rose with great rapidity between 1300 and 1350 A. D. From California to China varying types of evidence unite to indicate that during the 14th century there occurred a short period of unusual storminess. The climate of the past not only differs from the present but there is proof that many minor pulsations have taken place, growing less intense during the historical period.

In his studies of the glacial period, Penck, a German, shows that, at periods, stormy areas of the north descend southward, the storminess of Germany and the United States pushing southward to Italy and the southern portions of the United States, and, similarly, the desert belt about the earth moves toward the equator. At present, the storms and the deserts, as well as the rains of the equatorial district, extend relatively

farther north. These studies, though made independently, harmonize with those of Professor Huntington.

SUN SPOTS ASSOCIATED WITH STORMY PERIODS.

The study of sun spots reveals a cycle of about eleven years associated with periods of maximum and minimum cyclonic storms, a counterpart of the pulsatory change of climate, being a part of the larger pulsations of the remote period. A plot of the sun spots, accurately measured since 1749, shows not only these eleven-year periods but also larger cycles, of a century, more or less.

PRESENT AREAS OF HIGH CIVILIZATION.

Dr. Huntington shows that the present high civilization of western and central Europe covers but two per cent of the land and seventeen per cent of the world population. This region, enjoying a highly stimulating climate, has had for many centuries the advantages of racial inheritance, the legacy of civilizations of the past, inspiring religion, political freedom, and powerful institutions. Another region of high civilization exists in the northern and northeastern part of the United States with the adjacent strip of Canada. A third area of important civilization and energy lies in Japan, a fourth in New Zealand, and a fifth in California. All together these five regions are less than one-twentieth of the land and include about one-quarter of the population of the world. He suggests that this portion of the land is inhabited by people of great energy, due, in part, to the frequency of cyclonic storms with their corresponding changes of weather from day to day.

Did similar conditions prevail in the past? The author traces the invasion of races from less into more stimulating climates, the rise of great civilizations, and their later decline, drawing a path upon the globe from central Asia through Mesopotamia extending into the Mediterranean Sea, through which they have progressed. In outlining the storm belts of the earth it is shown that they pass through the areas of high civilization, except in the case of New Zealand, there being relatively few storms in the southern hemisphere. According to the hypothesis of pulsatory changes of climate

these storm areas, at times, extended farther to the south traversing the belt in which many of the earlier civilizations existed. Favorable climatic conditions appear to have prevailed in each of the great countries of the past at the time of their greatest prosperity.

Professor Huntington concludes that not only at present, but also in the past, no nation rises to the highest grade of civilization except in regions where the climatic stimulant is great, a favorable climate being an essential condition. He admits that various objections have been raised and offers answers. He realizes that a long and careful discussion is essential because the final decision of scientists as to the truth or falsity of the conclusions will have a deep bearing not only upon the interpretation of history but upon man's conscious plans for his future. He claims that there is no reason to despair in the appreciation of the climatic hypothesis of civilization; we ought, rather, to rejoice because it may lead to the solution of some of the evils which hitherto have baffled us.

W. H.

A SURVEY OF RESEARCH IN TEXTILES.

BY MARY GEDNEY SUPPLE.

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WHEN we consider how closely textiles are related to the home, we can easily understand a desire on the consumer's part to know something about how they are made and why one wears better than another. The patient study by which manufacturing methods were developed may not interest him, yet it has occurred to the writer that to educate the consumer in textile research may be of considerable benefit both to him and to the industry. Since scientific research is gaining a foothold in textiles, some knowledge of this may make the consumer more sympathetic toward manufacturers' problems, teach him how to select his materials more wisely and suggest ways in which he can co-operate.

To be convinced that science is gaining a stronghold in textiles, one need only examine current literature and compare it with that of a few years ago. Where magazines were formerly filled with fashion and trade notes, many of them now emphasize the science underlying the industry and a few of them devote most of their pages to scientific articles. This trend is also reflected by the greater attention given by general scientific journals to textile problems.

TEXTILE AND ALLIED ORGANIZATIONS PROMOTE RESEARCH.

The various associations of wool, cotton, and silk manufacturers are turning their attention more and more to scientific study in their special fields, the textile chemists having organized themselves under the name of the American Association of Textile Chemists and Colorists to encourage research, standardize tests, and perfect methods. The textile manufacturing and allied industries are organizing with the Bureau of Standards to consider the question of research and to standardize their products, forming committees to consider the subject from a general standpoint, and sub-committees to survey each industry for the most urgent problems.

Before considering what benefit research is to the consumer, it is well briefly to review some of the investigations made in the last few years in connection with wool and wool fabrics.

CHEMICAL INVESTIGATIONS.

To understand the reactions in any chemical process applied to fibers, it is of fundamental importance to know the chemical constitution of the fiber itself. In fact, it is surprising that textile science has advanced to its present state although we have had inadequate knowledge of the substances which make up our various textiles. There have been studies of wool and of the products of its hydrolysis in an attempt to determine its molecular structure, such work having rather definitely established the colloidal nature of wool.^{1 2} Studies have been made also of the absorption of acids,^{3 4} soaps⁵, and mordants⁶ by the wool, as well as the phenomena which occur during the application of stress, heat, and moisture⁷, and of the effect of moist and dry heat upon the wool fiber.^{8 9} Other experiments have shown that the outer part of the fiber is more resistant to chemicals than the inner.¹²

An interesting fact was brought out by Allworden who reported that there is a carbohydrate substance, which he named "elasticum", lying between the plate cells and the body cells of the fiber. He claimed that if this substance is removed, the wool loses its felting property and, therefore, urged that manufacturing processes should be devised to preserve it. The "elasticum" is soluble in all alies, and may be removed without other apparent injury to the fiber. He devised a test with chlorine which will show whether or not wool still has its "elasticum"¹⁰, and, if not, to measure the extent of the damage done. Further investigations of this reaction have been made, but not enough to attach any practical significance to the test¹¹.

PHYSICAL TESTS OF WOOL FIBER.

Another study, developed more along physical lines, is of the effect of various treatments upon the strength of fibers. Some German experiments on the action of light upon textile fabrics showed that exposure of wool to light does not lessen

its tearing strength to any appreciable extent, while silk loses some, cotton still more, and flax the most.¹² The effect of heat upon the strength of wool has been studied.⁹ The effect of weathering upon scoured and unscoured wool and wool treated with dilute alkalies has also been investigated in order to measure the influence of the alkali on the quality of wool produced by sheep pastured on alkali ranges.¹³ The action of chlorine, hypochlorous acid,¹⁴ and mineral acids on the strength of wools has been determined. There has been a somewhat comprehensive study of the influence of moisture in a given sample of wool upon its tensile strength and elasticity.^{15 16 17}

In considering only the physics of cloth manufacture, we view the strength problem from another angle. Investigators have brought out interesting facts with respect to the influence of the yarn and cloth construction upon the strength and wear of the fabric. Studies have been made of the effect of varying the size, twist, and number of ply in yarns.¹⁸ An attempt has been made to determine which weaves produce fabrics of the highest tensile strength, give high ripping strength, and withstand the greatest bursting pressure.^{19 20}

Journals are filled with discussions of the theory of every chemical process from scouring to dyeing, including comparisons of different scouring agents, studies of the action of finishing processes,²¹ chlorination,¹⁴ and carbonization upon wool. Bleaching, dyeing, and waterproofing are all being studied. In fact, so much is published about the chemistry of these processes that no one person can absorb it all.

USE AND CARE OF TEXTILES.

Research today includes not only problems of manufacture, but also those connected with the use and care of textiles. In the laundry field, studies which have been made of the common washing assistants, such as sodium carbonate, sodium borate, and sodium phosphate, show that they are about equally effective as detergents.²² While these studies were undertaken from the point of view of the power laundry, many of the results, such as the most favorable temperature for various soaps, are useful also for the home laundry.

The hygiene of clothing is another problem which has

received some attention recently. The question has been raised as to the relative merits of the various fibers in protecting the body from cold and as to whether or not cotton blankets can be manufactured so that they will approach wool blankets in heat retaining power. Experiments carried out by Haven²⁴ indicated that the heat retaining power of cotton blankets, thick and well napped, approaches sufficiently near that of good wool blankets to make them efficient protectors from cold. Other work has been done to make apparatus more nearly accurate for such determinations.²⁵ The Bureau of Standards²⁶ has recently reported some experiments performed on a piece of apparatus which takes into account, comprehensively, heat transmission, air permeability, and hygroscopic properties of the materials tested. Extended work upon standardizing tests with this apparatus has been done, and reports of actual tests made upon materials will probably be made in the near future.

In an attempt to make similar measurements for underwear, Miss Caton²⁷ noted the rapidity with which bottles covered with various kinds of stockings lost heat and found that the heat was lost most rapidly in the following order: cotton, silk, wool. When a current of air was directed upon the bottles, however, the silk-covered bottle lost heat more rapidly than the cotton-covered one.

IMPROVED ANALYTICAL METHODS.

It is important for the manufacturer, the buyer, the consumer, and the research student to be able to analyze textiles. Recently, there has been a tendency to work out some much needed improvements in such analytical methods. It is supposed to be the mark of a poor carpenter to complain of his tools, still I believe many persons who have been called upon to make these analyses have wished that some investigators had solved a few of the difficulties and worked out standard methods of analysis. It seems as though partiality had been shown to the food analyst in this respect. He has commodities somewhat similar in composition to textiles to work with, and yet his standardized methods give him some basis for analysis. When he determines the iodine value of a fat, or the polariscope reading for a sugar, he can consult

tables of data that will help him to interpret his result. On the other hand, the textile analyst may hang a colored sample in front of a light and find out that it fades in so many hours, but as yet he cannot interpret that result in terms of fastness to sun and weather.

The American Association of Textile Chemists and Colorists has felt this need of better methods and has made the perfecting and standardizing of tests one of the objects of the society. One of the first problems attacked by the Association was that of testing the fastness of colors. A committee has worked out provisional methods²⁸ for many of that kind which specify the exact conditions for each and the way they are to be interpreted.

SATISFACTORY METHODS LACKING TO TEST FOR FASTNESS TO LIGHT AND PERSPIRATION.

A satisfactory method for testing for fastness to light cannot be devised until more research is done. Several artificial lights have been proposed, but since none of them exactly duplicates the sun's rays, tests with them do not always correspond with those of the sun. Several suggestions have been made for solving this difficulty. One is to have standard samples dyed with colors whose fastness is known, and to test unknown samples by comparing them with such standards. Another suggestion is to try to modify some of the lights so that they will be more nearly like that of the sun. A solution might be the working out of some practicable method for measuring the intensity of light so that a test using sunlight might be standardized.

The situation with respect to a test for fastness to perspiration is much the same. Reagents proposed have not given results consistent with actual use. While the composition of perspiration is variable, it should be possible to secure a testing solution which will agree more nearly with the average condition of wear than do any so far proposed. In general, the tests have emphasized the acidity, while it seems that the acidity is not the important factor.²⁹ According to one theory, some perspiration stains are caused by the hygroscopic solids accumulating in the cloth and holding moisture, and, by another, the urea of the perspiration decomposes, in time

giving off ammonia and ammonium carbonate which affect some dyes. The damage done, however, depends upon the amount of solids accumulating and the length of time they are allowed to remain in the fabric.

MICROSCOPIC ANALYSIS EXTENDED.

The usefulness of the microscope in textile analysis has been considerably extended. Improved methods of cutting sections of fibers and fabrics for microscopical study have been devised.³⁰ Such studies give valuable information concerning the penetration of dyes and the nature of finishes on fibers, while microscopical studies on fibers dyed with vat dyes show that the dye penetrates the fiber only to a slight extent. From this fact and other data, Hoxie³¹ developed the theory that the cotton fiber is covered with a cellulose peroxide coating which oxidizes the reduced vat dyestuff and precipitates the dye as a shell on the fiber. The microscope has also been used in the measurement of the diameters of wool fibers to secure standard grades of wool³².

Other research includes a proposed method to determine the percentage of wool and artificial silk by the use of ammoniacal copper solution³³ and a new one to determine the water resistance of fabrics.³⁴

This brief and incomplete sketch of recent research in textiles affords evidence that the age of scientific investigation has reached the American textile industry. In a recent number of the *American Dyestuff Reporter*, Professor Olney stated that probably the most important development of the next quarter century will prove to be research in textile chemistry and its application to dyestuffs. Apparently it is time for the consumer to ask himself how this research will affect him, and also the proper time for teachers of textile home economics to ask themselves how they can make the scientific work already done best serve the consumer, and how they can encourage those researches which will benefit him.

Of course, any discovery that improves our textiles, benefits the consumer and is, therefore, of interest to the home economics profession. Still certain phases of it are particularly vital to the home. Considering in this light the phases of

research just mentioned, it seems that work on the constitution of the fiber will benefit the consumer only in so far as such work enables the manufacturer to improve his processes, inasmuch as the consumer cannot use such information directly.

A study of the action of various reagents upon the strength of the fabrics has a direct bearing, however, upon home problems. The treatments which the fibers will stand is something that every user of textiles should know, and teachers of home economics should impart such knowledge to consumers, as well as add to the data available on the subject.

SUBJECTS FOR TEXTILE RESEARCH.

The effect of fabric construction upon their strength and wearing quality is another problem that falls into the same class, because it has a direct bearing upon the selection of the right fabric for a specific purpose. The more knowledge consumers have in regard to this, the more intelligent users of textiles they will become.

In the laundry field there are essential questions for the home—questions as to the correct temperature for washing with various soaps, the proper way to use a water softener, and the effect of various laundry processes on the color of the textile are all important to the consumer. He should know what the textile world is doing to get this information and, when possible, the home economics textile workers should help to get it.

The same is true of any work in the field of hygiene of clothing. What fibers, weaves, and weights of materials best serve the needs of the body are questions which can not be settled without considerably more experimentation. When it comes to the methods of textile analysis it may be harder to see that the consumer should be interested. Upon considering the importance of textile analysis for factory control, buying, and research, it becomes apparent that indirectly the best interests of the consumer depend upon our getting better analytical methods. Many of the problems that do interest the home depend for their solution upon some determination as the fastness of a dye, the tensile strength of a fabric, or the absorptive power of a material.

While the consumer's demand is for fabrics which will wear, let him keep in mind that ideal fabrics are not made in a day. A review of the researches now being carried out may make him more appreciative of the patient work already done to produce the textiles we have today. Above all let him remember that in order to get fabrics which will wear well, or in order to be able to judge the lasting quality of fabrics, the science of textiles must be developed.

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“WOOL: THE WORLD’S COMFORTER.”

A REVIEW OF W. D. DARBY’S BOOK.

BY JOHN BRUCE MCPHERSON.

A certain amount of credit is usually given by readers to statements in a book written about a technical subject, although the author may not be known in that particular branch of industry or science. It is all the more necessary, therefore, for the author of that kind of book to write with completeness, thoroughness and accuracy. This is particularly applicable to the present day when many writers with superficial knowledge of an industry assemble material derived from various sources, some reliable and some the reverse, and publish it to instruct the uninformed and the unenlightened. That a writer of such books should possess a fund of reliable information and should have the ability to convey to his readers that information in exact and accurate language goes without saying.

It is regrettable, therefore, that a little book entitled, “Wool: The World’s Comforter”, prepared by W. D. Darby under the direction of the *Dry Goods Economist* so that, as the latter’s managing editor says, “All may know the properties and types of woolens”, lacks these very essentials of a worth-while volume. Instead of helping to correct the too prevalent loose thinking and inexact writing, it beclouds rather than clarifies the subjects treated and increases, rather than lessens, the existing confusion.

INACCURATE WRITING IN THE INTRODUCTION.

The introduction by Mr. Ernest C. Hastings, Managing Editor of the *Dry Goods Economist*, contains many terms to which exception must be taken, and they appear frequently in the pages which follow it. For example, it is stated in the preface that “folks realize in a general way that *woolen* fibers come from the backs of sheep.”

The fact of the matter is that wool, and not *woolen*, fibers come from the backs of sheep. There is no raw material called woolen, and it is surprising to find a man connected

with a trade paper of the *Economist's* standing falling into such an error.

Further along in the introduction he says: "Most people think that wool suits or hats or socks are all alike, whereas there is often a very tremendous difference in these articles that may appear exactly alike. One may be of virgin wool and the other of wool that has been worked over many, many times." That is followed by the statement that "wool is the one textile for which no substitute has been found. . . . No material has been discovered that will take the place of wool"; and the writer adds immediately that "so called imitation wools may look, feel and appear like wool, but the body refuses to react to these in the same way it does to *real* wool."

In using the term, "virgin wool", (which has been adopted within recent years to help along a certain propaganda and as a "selling idea"), and implying that fabrics carrying reworked wool are inferior to so-called "virgin" wool fabrics, Mr. Hastings has fallen into an all too prevalent error which he should have avoided and not adopted. He should know that, with the hundreds of grades of so-called "virgin" wool in every country where wool is grown, the use of "virgin" wool in the making of fabrics does not necessarily mean a quality superior to those carrying a proportion of reworked wool, because many "virgin" wools are distinctly inferior to many grades of reworked wool. Quality in a fabric does not depend alone upon the raw materials entering into it; much, if not more, depends upon the processes of manufacture through which materials are put.

If Mr. Hastings means that reworked wools are "so called imitation wools", he is writing inaccurately, for having the characteristics of wools which come direct from the sheep's back, they are nothing but wools, which have been born again, and cannot be distinguished unerringly by any known chemical or microscopic test from so-called "virgin" wools. If he does not mean the foregoing, we would like him to name some so-called "imitation wools." There are none, and it is but adding to the prevalent confusion in the minds of many to talk of "substitutes", "imitation wools", "adulterants" and "counterfeits" with which we have been surfeited in recent years.

Mr. Hastings says also in the preface, "That all may know the properties and kinds and types of 'woolens', the *Dry Goods Economist* has had prepared one of the most complete brief treatises on wool ever attempted", and he adds, "we doubt if any volume of its size gives in condensed form so much vital information about the oldest of our materials."

ERRORS ARE PLENTIFUL IN THE TEXT.

With an introduction so carelessly written, it is not surprising to find in the pages which follow it, inaccuracies in almost the same proportion as appear in the preface. What a few of the many are, we shall attempt to point out.

The author says¹ that "between 1801 and 1812 merino sheep were introduced [into the United States] by William Davis." Presumably he means William Jarvis who was an American Consul in Spain about that time and secured many Spanish merino sheep for export to this country to improve our flocks. He also says² that "the foundation of the Australian sheep raising industry seems to have been laid by Captain John Macarthur who brought some merinos there from the Cape in the beginning of the 19th century." There is no doubt about Macarthur's work in Australia. The plain statement should have been made that the foundation was laid by him instead of the implication of doubt carried by the word, "seems." *Dalgety's Review*³ of July 1, 1916 referring to the shipment to England by Macarthur (who had been experimenting with sheep since 1793) of eight fleeces of wool, grown on his property at Elizabeth Farm, Parrametta, New South Wales, stated that "this incident may really be claimed as the birth of the Australian wool industry." Again it is said in the same article, that "the foundation of the industry was well laid by Macarthur."

THERE IS A MARKED DIFFERENCE BETWEEN WOOLENS AND WORSTEDS.

The author, like the writer of the preface, does not comprehend that there is an important difference between woolens and worsteds based upon the processes used in their making, and that each form a branch of the embracing term, wool manufacture. Both the author and the writer of the intro-

(1) Page 14. (2) Page 14. (3) Page 89.

duction seem to think that the word, "woolens", includes worsteds, and the term, "woolen industry", is broad enough to include the worsted industry, a common mistake which they should have been careful to avoid. That the author has no fixed idea of this difference is generally in evidence, for he says⁴ that "Flemish immigrants in England specialized in fine cloths which became known as worsteds", as though no fine cloths can be produced by the woolen process. Does he mean that there are no fine woolen cloths?

This knowledge of the difference between woolens and worsteds is a fundamental requirement for persons attempting to write a book containing "vital information about the oldest of our materials." To show that such knowledge is needed, it is only necessary to quote from a recent article in the *Bradford Wool Record and Textile World*⁵ which said:

It is an undoubted fact that the terms "woolen" and "worsted" used in the industry to denote two quite distinct branches producing entirely different products, have no special significance to the general public. In the great majority of cases the word, "woolen", is indiscriminately applied to all fabrics made from wool, and it is doubtful if the ordinary retailer outside the manufacturing areas could explain the essential difference between a woolen fabric and one made on the worsted principle.

Yet in the industry itself, the two branches engaged in manufacturing these cloths are so distinct, and the methods employed are so different, that each has come to be regarded almost as a self-contained trade, although each constitutes an important part of what is known as the wool textile industry.

The line of demarkation is clearly defined in the selection of the raw material. In the woolen trade, short wools technically known as clothing descriptions are used, while in the worsted trade the fibers must have sufficient length to enable them to be passed through the combing process; hence the raw material used in the worsted branch is described as "combing" wool. And as from this stage forward the methods employed in converting the wool into cloth are quite different, it can be readily realized that a woolen fabric differs materially in its essential characteristics from a worsted cloth.

In the woolen section, the aim of the manufacturer is so to manipulate the fibers passing through the machinery that they become inextricably mixed in a sort of criss-cross fashion,

the resultant yarn containing the longest and the shortest fibers in the blend uniformly worked in to present a level and consistent thread.

In the worsted section, on the other hand, the preliminary processes have for their object the elimination of the short wools and the arrangement of the fibers in a parallel position as distinct from the criss-cross arrangement in the woolen process.

EVIDENCE OF THE AUTHOR'S FAILURE TO MAKE DISTINCTION BETWEEN WOOLENS AND WORSTEDS.

Instead of making clear to his readers the important distinctions between woollens and worsteds, the author not only is silent on the subject, but by the incorrect use of the terms, "woolen industry," to cover the wool manufacture and "woollens" to include worsteds, he broadcasts misinformation instead of enlightenment.

That the author does not understand that essential fact, is further evident from the statement⁶ that "for many generations before this there had been considerable woolen manufacturing in Yorkshire and other Northern counties; but after the application of steam power the North began to thrive industrially at the expense of the rest of the country, and during the 19th century the woolen manufacturing industry became concentrated chiefly in the West Riding of Yorkshire."

If the woolen manufacturing industry is concentrated chiefly in the West Riding of Yorkshire, the query arises, Where are England's well known worsteds manufactured if not in that very district?

The same lack is also manifest when, treating of the establishment and development of the woolen industry in the United States, he says⁷, "From this time on, [meaning 1800], the industry developed gradually until 1845 when the city of Lawrence was founded and the career of the great American woolen industry, as we know it now, really began."

The fact of the matter is that Lawrence is not a great center for the production of woollens, but for worsteds. The Arlington Mills, the Pacific Mills, the Washington Mills, the Wood Worsted Mill and the Ayer Mill do not make woollens, but do produce worsted goods in quantities so great that the pro-

duction of woollens, if it ever was considerable, has sunk into insignificance there. And again he says⁸: "Boston is the principal wool market of the United States. It owes this position to its proximity to the woollen manufacturing industry which is centered in New England. Philadelphia and Chicago come next in importance." Where, we ask, is the worsted industry centered in this country, if not in New England? And, is St. Louis not a wool market of enough importance to be at least mentioned?

MISTAKEN PERCENTAGES OF MERINO WOOL IN CLIPS OF
VARIOUS COUNTRIES.

Nor does the author write with any more care or correctness in the chapters on "The Wool Bearing Sheep" and the "World's Wool Production." In the former after stating⁹ that "it is difficult to define the difference between wool and hair", and that "many authorities maintain that there is no real difference between them", and that "wool is simply a variety of hair", he proceeds to set forth those very differences. He also declares,¹⁰ without quoting his authority, that wild sheep "are still found in large numbers in South Africa, South America, India, Thibet, our own Rocky Mountains and other localities." That some wild sheep are still found in our Rocky Mountains may be the fact, but that they are found in "large numbers", we doubt.

In the latter chapter, the author states that "exact estimates have never been made of the total wool production of the world", adding that "such estimates, in fact, have always been impracticable, as sheep raising is carried on in many regions where there is no official census in existence."

If "exact estimates have never been made of the total wool production of the world" (and they cannot be proved inexact because the product cannot be known exactly) it seems strange that in the next paragraph the author states that "all authoritative estimates give¹¹ the total production of wool as about 2,800,000,000 pounds annually." Exactness cannot be reached in estimates and they are issued simply as the best information obtainable.

The author makes the remarkable statement¹² also that "over 80 per cent of the Australian wool is merino", which is

(8) Page 48. (9) Page 25. (10) Page 26. (11) Page 33. (12) Page 33.

at least from fifteen to twenty per cent too high. He also says¹³ that "in Uruguay about 80 per cent of the wool is from fine merinos", whereas authorities in the Boston Wool Market declare that the percentage of merinos in Uruguay ranges from 12½ to 15 instead of 80, as given by the author. Nor is he any better informed about the percentage of merino wools in the clip of his own country which he says¹⁴ is "little more than half." This is also at least 20 per cent too high. He also makes the statement¹⁵ that "Wyoming and Montana produce between them 70,000,000 pounds annually, whereas the fact is that those two states were estimated by Government officials to have produced 56,882,000 pounds in 1919; 44,222,000 pounds in 1920; 37,900,000 pounds in 1921 and in 1922 (the year the book was issued), 37,917,000 pounds of wool in the grease, or scarcely more than half the quantity the author gives.

ERRORS IN GIVING THE PRODUCTION OF CHINA AND NEW ZEALAND.

He also states¹⁶ that "there is reason to believe that the wool production of China and Mongolia is large; but no estimates of its amount are available, and only a comparatively small volume of low grade or carpet wools from these countries find their way into the world's commerce."

Had the author consulted the Annual Wool Review of this Association issued in 1922, he would have discovered that China produced and exported to this country alone 109,667 pounds of Class I wools in the fiscal year 1914; 563,848 pounds in 1915; 1,221,057 pounds in 1916; 4,439,304 pounds in 1917; 2,677,738 pounds in 1918; 10,205,327 pounds in 1919; 5,560,917 pounds in 1920 and 8,928,284 pounds in 1921.

Exports of Class II wools in the same years ranged from 28,448 pounds in 1915 to 1,689,335 in 1921 and 2,081,026 in 1920. The average exports of mohair for the nine seasons were 242,612 pounds, and the comparatively "small volume" of low grade or carpet wools has averaged 30,864,193 pounds per annum for the past nine years, and has ranged from 4,033,447 in 1920 to 67,285,445 pounds in 1922. The total imports of all classes of Chinese grown wool have averaged

35,492,005 pounds for the last nine years and have ranged from 12,161,664 pounds in 1920 to 68,455,152 pounds in 1922.

Likewise the author fails lamentably when he attempts the easy task of giving the production of New Zealand which he says¹⁷ "produces annually about 117,000,000 pounds of wool", of which he states "fully 80 per cent of this (it should be 96 per cent) is crossbred wool obtained by crossing merinos with Romney Marsh, Leicester or mutton breeds." In this case the author is slightly less than 100,000,000 pounds too low! In the eight seasons from 1913-1914 to 1920-1921, inclusive, New Zealand's production ranged from 181,282,880 pounds in 1915-1916 to 227,521,228 pounds in the season of 1918-1919. Where the author managed to pick up so many erroneous statements is a mystery when by search or proper inquiry he would have been correctly informed.

HIS FIGURES FOR CONSUMPTION ARE UNRELIABLE.

Nor is the author any more accurate when he attempts to give his readers the wool consumption of the world's large wool manufacturing countries. He says¹⁸ that "more than half the total world production of wool is consumed by Great Britain and the United States", and that "consumption of wool in the United States in recent years has averaged around 700,000,000 pounds, while consumption in the United Kingdom averages between 800,000,000 and 850,000,000 pounds."

What does the author, writing in 1922, mean by "recent years"? Could he have had in mind the extraordinary war years, when he placed the average consumption of this country at 700,000,000 pounds? If he had, he conveys an entirely erroneous impression to his readers. If he means the years immediately preceding the war, his figure of 700,000,000 pounds is altogether too generous by 150,000,000 pounds, for the average annual consumption of this country before 1914 was not 700,000,000 pounds but about 550,000,000 pounds, or 150,000,000 pounds less than his statement.

His figures for the United Kingdom are no more accurate than those for the United States, according to Sir Arthur Goldfinch, who in his recent report to the British Australian Wool Realization Association, placed the consumption of the

United Kingdom in 1922 at 725,000,000 pounds. "The volume of world business in that year", he said, "was far greater than the boom year of 1919-1920, and in England the combs and spindles had a larger output in 1922 than ever before." "The United States", he continued, "equaled or exceeded the abnormal war years 1917 and 1918, which in their turn had far exceeded all previous figures." If Sir Arthur Goldfinch is correct in his statements, then those of the author are hopelessly inaccurate and greatly exaggerated, except for abnormal war years.

JOHN CORNISH DID NOT ESTABLISH A WORSTED MILL
IN BOSTON IN 1693.

An example of the editor's inaccurate statement may be found in his reference to John Cornish of Boston. It is rather startling to read¹⁹ that "in 1693 a worsted mill was established by John Cornish at Boston." One unfamiliar with the industry and its comparatively recent origin here would suppose that there was in this country a worsted industry with mills more than two hundred years ago!

What authority there is for the author's statement we know not; but if he relies upon Weeden, he has drawn too free a bow. In his *Economic and Social History of New England*, Weeden²⁰ wrote of John Cornish as follows:

John Cornish was an humble dyer, comber, weaver and fuller, the inventory of whose effects reveals the exact processes of his business. He dyed wool using two furnaces and he combed it either colored or white. Doubtless the spinning was done in the homesteads of eastern Massachusetts by dames, or the daughters of the dames, who had been taught in spinning classes. The farmers might have taken home the clean "top" wool—from which the noil or short fiber had been cleared by the two pairs of combs worked by two men—on the market day. Another day they would bring in the spun worsted, taking their pay in cloth or yarn. The wool might be their own, or put out by Cornish for the spinning. Evidently he traded his manufacture for that of others; he combed and wove, but he did not card or spin. The "white" and "coverlet" raws were carded in the homesteads; hand cards were very common. . . . Dyeing in two furnaces, combing with two combs, weaving with four looms a detached and independent fulling mill, would make a considerable

business. Serge was in the looms; when finished it would be worth 3s. 6d. per yard. It was worsted or partly worsted. He had one piece of kersey, probably of carded stock and probably obtained by exchange in the operations of the fulling mill. . . . I have said that his business was considerable for the time. His estate was only £247 13s. 5d. . . . He was a worsted comber and weaver: his other business was subordinate to that.

He is called "this humble pioneer in Boston" and "the first organizer of this industry in these busy lands." He used combed yarns and made kerseys, and "serges partly made and also finished, appeared in the inventory of his estate"; but it seems to us that he did not establish a worsted mill, certainly not a mill as understood in the present day. To that extent, at least, the author's statement is incorrect and misleading.

When the author comes to discuss in Chapter X the manufacture and use of shoddy, he fails utterly to give what he says "is important—a clear understanding of the term." He fails to give his readers accurate definitions of that term—definitions known by accredited writers of standard books on textiles and accepted by wool manufacturers as accurate. The same lack is evident when he touches upon "virgin wool", the chapter giving no suggestion to the uninformed reader as to the comparatively recent appearance of that term "in the public prints and the halls of Congress," or of the purposes for which that term was adopted and intended to be put, or the differing definitions drawn to fit the necessity of many cases. It is all too obvious that the author's knowledge of the terms he uses is superficial, inaccurate and therefore unsatisfactory.

In Chapter XII devoted to a Dictionary of Wool Fabrics, the author says that in a strict sense it is impossible to define exactly what constitutes any given woolen or worsted fabric; such as tweeds or serges, and "that the nature of even such staples varies greatly according to the *kind* of raw material used, the manner in which the raw materials are blended and the skill, care and equipment employed in the manufacturing processes."

He could, at least, have indicated to his readers that in worsteds, owing to the processes through which the raw

material is put, no so-called shoddy or reworked wool can be or is used, but that in woolens, owing to the processes through which the materials composing them are put, so-called shoddy can be used; and that when used with manufacturing skill, highly satisfactory results can be and are secured.

Strangely enough in this chapter can be found a definition of worsted, but none for woolen. This is all the more surprising, because from the frequency with which the word woolens was used in earlier chapters and the infrequency of the word worsted, the reader is puzzled to account for the presence of the one about which little is said and the absence of the other about which much is written.

There is need for a book along the lines of the one under review. In these times when high schools and universities are offering courses in Home Economics and greater attention is being given to the purchase of wearing apparel, there should be a field for such a book well conceived, well written and authoritative. Unfortunately this one lacks too many essentials to fill that need. To make it acceptable and reliable, the numerous errors to which we have called attention (and perhaps many more are in the chapters not noticed) should be eliminated by a thorough revision of the present text; or by the preparation of new manuscript free from errors, and written to bring the book up to the date of its appearance.

DEVELOPMENTS IN WESTERN WOOL SELLING METHODS.

EVERY article which treats of selling methods tried by wool growers or owners of wool is of interest to historians of the industry, as well as wool merchants and wool manufacturers. Within recent years, efforts have been made to collect large quantities of wool in pools at given points, grade it roughly, and sell it under the sealed bid plan. Much wool has also been sent to wool warehouses operating under United States Government licenses, and the more ambitious suggestion has been made that both state and national wool pools should be attempted in an effort to sell the wool co-operatively, "cut out" the middleman, secure higher prices for the growers and dispose of the wool to the manufacturers in what advocates of this plan are pleased to call an "orderly" fashion, as there is demand for it.

Without endorsing the aims of, or claims made by, enthusiasts for these new methods of selling the country's wool product, we reprint an article from the *National Wool Grower* on the new selling methods simply as a contribution to the information obtainable on this subject. It is as follows:

J. B. McP.

Discussion of changes in wool selling methods employed in range states dates from the first trailing of sheep from the new domains of Spain toward American soil. Visitors from countries that compete with us in the wool market have been emphatic in expressing their surprise at methods to which Western United States adheres in preparing wool for market and in effecting sales.

Our wool growers may admit, without reflection upon their business ability, that there is a good deal that is ancient and inadequate in getting their clips from the range to the mill. At the bottom of the matter lies the fact of the non-existence of an American land policy. The free and unregulated and unsecured use of the public domain has had some advantages, but because of the lack of certainty of continuation, the business of wool growing, heretofore largely conducted upon public lands, has been unable to observe or adopt many of

the business practices that have meant so much to manufacturing industry and also to the agriculture of the farming sections.

The land problem does not seem to be nearing a constructive solution, but time and natural and commercial selections are doing their work. The strictly grazing areas are coming to be recognized as such. More acres are coming under the control of those engaged in the pastoral industry, and the range live stock business, in reduced proportions, is assuming a more permanent phase.

DEPARTURES FROM OLD METHODS.

The old methods were the best of their time, but many of them are now clearly seen to be unsuited to producers' needs under new conditions. Apparently it has long been recognized that the selling of wool called for something better than transactions between individual producers, who naturally cannot be fully posted on trade conditions, and the large corporations located at points of concentration and sale. In the selling of cattle and sheep, a system is firmly established that places representatives of the producers at the markets to make the sales and to work for higher values. A similar plan operates for wool in other countries, but cannot be said to have been adopted in this country except in the handling of farmers' clips.

Probably the first concerted movement to set up a new wool selling plan was one launched in 1901 as the Associated Wool Growers Company which handled two and one-half million pounds in 1902. For some reason, the Associated Wool Growers Company did not continue. Possibly the financing was at fault or those behind it were not situated to make the continued effort and survive the discouragements that always confront progress. However, in 1909 another movement was launched by Wyoming and Montana growers in conjunction with Chicago interests, under the name of the National Wool Warehouse and Storage Company. This was an innovation in two respects: It proposed to store and merchandise wools at Chicago and it operated entirely on a commission and non-speculative basis. On both counts it drew strong fire, but through a large share of good and evil reports it is today an important factor. Many growers agree that this concern's greatest service has been rendered by maintaining an alternative to the course of selling at home. Such service, though very tangible, does not build up or strengthen producers' representation at the market.

Substitution of Australian styles of shearing, handling and selling wool for existing practices was demonstrated and ardently advocated by J. E. Cosgriff of Salt Lake City and

others associated with him. Revolution was apparently not to take place and the longer, slower and expensive process of evolution was left to shape the grower's relation to his wool beyond the sheep.

POST-WAR DEVELOPMENTS.

One war year of government control of wool put all upon a consignment basis and with generally good results. Possibilities in advancing markets of the next year were more attractive to the trade than the commission business and selling "as a clip" and "direct to the dealer" was resumed and continued until the market was disrupted on May 20, 1920, when the commission plan was reinstated. In 1921, with large debts and low wool prices, most growers were ready to accept any plan or offer that meant a few actual dollars. Realizing the position of their clients, some bankers co-operating with officers of wool growers' organizations successfully attempted to furnish an alternative to the plan of making forced sales at home. Three million pounds of Montana wool and nearly a million pounds of the Utah clip were placed under control of growers' selling committees. Financing of advances was done by home bankers and the selling in both cases effected by the National Wool Warehouse Company. California handled a million pounds through a newly established warehouse managed by growers. The above undertakings added to by the older and more generally adopted co-operative system of Ohio and other central states, made up a total of 27 million pounds contributed by twenty-one states in 1921 to be sold in accordance with the principles of orderly marketing. It does not now seem possible to foresee just what is to be evolved as a final working plan of selling and distributing range clips. That something besides individual selling at home is desired, is evidenced by what has already been done. The feeling is spreading to new sections, apparently in response to legislation and country-wide agitation to encourage co-operative selling as a means of bringing producer and consumer nearer together for mutual advantage. In Wyoming, Idaho, and other states, new combinations of growers are acting to concentrate large quantities of wool to secure competition among buyers. In some cases pools are formed; in others the assembled clips are sold separately but in a time sufficiently limited to offer an opportunity for buyers to make large purchases quickly and at lessened expense. With what has been attempted and what has been accomplished in the past, added to by new endeavors of the present season, the situation is more interesting than ever before and more likely to involve permanently improved practices.

A brief resume of the status of wool selling undertakings in some of the Western states concludes this discussion.

THE JERICHO POOL.

About ten years ago wool growers in the vicinity of Jericho, Utah, came to an agreement upon a plan of combining a number of clips to be sold as one lot. The offering was large enough to attract competition. Jericho is one hundred miles southwest of Salt Lake City. The town, or to speak more correctly, the place, consists of a shearing pen of thirty-two stands for machine shearers, a holding shed, a boarding house, two cottages for railway section hands, a water tank and a pond filled from the tank. Wool shed there is none, neither is there a station agent. Jericho was selected because of its location on the railroad at a point convenient of access for the bands on their way from the winter range to the summer grazing lands. The owners live chiefly in Fountain Green and Nephi, towns farther east. The sheep of the section are practically all of merino blood without mixture, very little crossing having been done. No crossbred clips are admitted to the pool. On account of the uniformity of the clips, a pool price has been satisfactory to the owners. The large amount, 800,000 pounds, has attracted buyers and on account of the fact that the sale comes before shearing time in the territory farther north, it has come to be regarded and awaited as an index of the condition of the market and what can be expected by those selling at a later time.

In 1919 the Jericho pool was sold for 45 cents per pound. In 1920 it was disposed of for 71 cents, only a short time before the market collapsed. The pool was not sold as a unit in 1921, a majority having voted against acceptance of the highest offer received, 17 cents. Bids were called for on the 1922 pool, to be received on February 8. A large manufacturer's bid was 36 1/8 cents, but the offer was rejected. On April 26, an offer of 40 cents, made by Hallowell, Jones and Donald, Boston dealers, was accepted. The pooled wools were considered to be principally of the fine clothing grade and to have an average shrinkage of 63 or 64 per cent.

The following agreement was signed by about fifty owners of the clips making up that year's pool:

WOOL POOL AGREEMENT.

"For the purpose of more successfully marketing our wool, we, the undersigned wool growers, hereby enter an agreement, one with another, to pool our 1922 wool clip and name the following as members of the selling committee: Peter Jacobson, George E. Cook, George E. Collard.

As members of this pool, we further agree to comply with and be bound by the following rules and regulations:

1. The selling committee is hereby authorized to advertise said wool for sale and receive bids on same at the Bank of Fountain Green, Fountain Green, Utah.

2. Whenever, in the opinion of the selling committee, a fair and bona fide bid has been received, said selling committee shall call together the signers of this pool and present said bid for their approval. Members may be represented at this meeting by proxy.

3. A majority of the wool represented at the above mentioned meeting shall have power to authorize the selling committee to accept or reject any and all bids.

4. We absolutely disapprove of bids offering a reduced price for that class of wool usually classed as 'Tags'.

5. All pooled wool must be shorn before lambing.

6. All bids must contain a clause offering, at least, ten cents per pound advance on the wool offered in this pool.

7. This pool may be terminated at any time whenever a majority of the wool represented show by vote that they favor termination.

With full confidence in each other and with mutual and individual respect for the agreement into which we have entered, we hereunto subscribe our names and the approximate number of pounds of wool we enter in the pool."

POOLS IN OTHER WESTERN STATES.

In the vicinity of Sugar City, Idaho, in what is now Fremont County, and portions of adjoining counties, wool growers have for fifteen years followed the plan of combining their clips for sale. In some seasons the pool has been sold by consignment, and at other times sales have been made at home. Usually about 150,000 fleeces have been included. Most of the members are also farmers and only once or twice has any grower sold independently after having joined the pool. The pool for 1922 was not organized until after several former members had contracted their clips. About 40,000 fleeces were included in the sale effected by the committee late in March at prices ranging from 27 to 30 cents.

At Idaho Falls another pool has been organized this year by sixty growers whose clips total one-half million pounds. The contract signed by the growers names a committee of five to conduct the business and receive bids. Sales are to be made upon the agreement of owners of three-fourths of the wool represented. By the first of May a sale had not been effected.

In the vicinity of Boise, about one-half million pounds of wool, chiefly farmers' clips, were handled in 1921 by a selected

committee, the selling being done subsequent to grading and returns made on the basis of the accepted bid for each grade and for the amount of each grade actually contributed.

In addition to the Jericho pool, Utah has another famous offering of wool at Parowan, in the southern part of the state. Sixty-nine owners combined in offering 64,000 fleeces of the year's wool under terms of the following agreement:

"We, the undersigned sheepmen of Iron County, mutually agree to pool our clip of wool on the following terms: We agree to pool our entire 1922 wool clip and place the same in the hands of James C. Robinson, Jr., Wilford Day and Jos. B. Dalton, said committee having been chosen for this purpose at a meeting of the Iron County Woolgrowers Association held Sunday, January 22, 1922. We delegate to said committee the right to sell or otherwise dispose of said wool with power of attorney to sell or otherwise dispose of said wool without further notice to us.

We further agree that if we or either of us sell our wool without written consent of the entire committee, we will forfeit 5 cents per pound on our entire 1922 clip of wool, said forfeit to go into the treasury of Iron County Woolgrowers Association."

The Parowan pool was sold on April 20 at 34 cents to a manufacturing concern.

A state-wide wool marketing plan was set up in 1921 by joint action of the Utah Wool Growers Association, the State Farm Bureau, and of Salt Lake City and Ogden bankers. About one million pounds was disposed of during the fall months at prices that netted contributors several cents per pound more than could have been obtained early in the season. Most of the clips were graded and sales reports made upon the basis of graded values.

A similar plan was adopted for the following year with assurance that if a sufficient amount of wool was received it would be concentrated and offered for sale in a warehouse at Salt Lake City.

The plan evolved by California to secure modern selling service is not a pool. A number of growers subscribed for stock and formed a corporation known as the Northern California Wool Warehouse Company. The warehouse is operated under license from the Federal government. The contract obligates the grower for three years at a cost of $1\frac{1}{4}$ cents per pound, which covers unloading, storage and insurance until February 1. This payment is made in case clips are sold independently. If more than one million pounds is received at the warehouse, this charge is one cent per pound. Prior to sale day, sample bags from each clip are opened, each owner files his reserve price and sealed bids are received

from the buyers on a day set for selling. Unsold wools are then graded at an additional cost of $\frac{3}{4}$ of a cent per pound, which includes the charge for making a sale. In 1920 over a million pounds were handled, of which one-third was held for grading.

At San Angelo, Texas a warehouse somewhat similar to that in Northern California has been in operation for several years. Under the auspices of the Texas Farm Bureau Federation, an organization was formed to be known as the South-western Farm Bureau Wool and Mohair Growers Co-operative Association. Over six hundred growers have contracted with the Association for the selling of their clips. The contract is binding for five years for all the wool produced by the grower in that time, under penalty of a payment of five cents per pound upon any wool produced by a member and marketed by any other means. The association is given full power to grade and sell the wools, and payment is made at the average price received for each grade in the year's receipts. All expense is deducted pro rata from the returns made.

The National Wool Warehouse and Storage Company has received its support very largely from growers living along the line of the Union Pacific Railway in the western part of Wyoming. This year efforts at pooling have been inaugurated at Buffalo and Casper, and the plan is being considered by Cokeville growers. The Buffalo pool comprises over one-half million pounds. A larger amount is expected to be received at Casper and handled under the plan of offering individual clips for sealed bids.

Over three million pounds of the 1921 clip were received and sold through the Montana Wool Acceptance Company, an organization formed by the State Wool Growers Association. Through this company, in which home bankers were represented, advances were provided. The wools were forwarded to Chicago for storage, grading when necessary, and for sale. The amount handled was disposed of at an average net price of five cents per pound more than was obtainable at shearing time. The same plan is in operation this year with assurance of an increased volume of business.

At Dillon, Montana, a company formed by wool growers constructed a warehouse in which one and three-quarter million pounds were handled in 1921. The selling was principally effected by offering individual clips under the sealed bid plan.

Similar selling methods have been followed for some years at Miles City and other points in eastern Montana.

Nineteen hundred wool growers in sections of Oregon and Washington tributary to Portland, have contributed to build-

ing up the Pacific Co-operative Wool Growers. The agreement with growers is similar to that described as adopted by the Texas organization. This Portland concern operates scouring bowls for testing shrinkage of wools handled, and has proven its efficiency in warehousing and grading, and in selling. Some of its wools are disposed of to mills located in coast cities. The success achieved by the management in handling farmers' clips has attracted the attention of larger owners and a large patronage from the range sections of the Northwest is assured. At Portland there is also the Western Wool Warehouse Company, under growers' control, and the Columbia Basin Wool Warehouse Company.

Editorial and Industrial Miscellany.

BRITISH EFFORTS TO CAPTURE AMERICAN MARKETS.

In a letter to former President Wilson under date of November 16, 1913, the late Mr. Walter H. Page, Ambassador to Great Britain, wrote that "British concern for commercial interests never sleeps."

That is particularly true at this time when the wool manufacture of England is in anything but a comfortable condition due to a number of causes. A discovery of an opportunity to expand British commerce recently made by the British consular staff at San Francisco was forwarded to the Department of Overseas Trade and by it brought to the attention of their exporters for action. It was pointed out in the *London Times Trade Supplement* of August 4, that because of low direct freight charges to the Pacific ports, British exporters of textiles can land their products sent *via* the Panama canal at less cost for carriage than distributors for our manufacturers can ship either by coastwise vessels or by rail to these same ports. In other words, it was stated to the British manufacturers whose raw materials are available to them free of all duty, that if their products can be manufactured at the same cost paid by the American manufacturers, whose wools used in manufacture carry a thirty-one cent duty per pound of clean content, they can be landed more cheaply from England on our Pacific Coast, notwithstanding our tariff duties, than can our own domestic products.

Investigating the carrying charges from New York to the Pacific States, The New York *Commercial* found that "exact figures show a shipment for less than carload lots of £1 15s 6d by all water route and a charge of £25 2s 6d for shipment from United Kingdom to New York, and New York to San Francisco by coastal steamer", the item of £25 2s 6d being made up "in a charge of only £5 4s 6d for the transatlantic voyage and £19 18s for the coastal trip from New York to Frisco." The cost of shipment by rail from New York to San Francisco amounts to £36 7s. The flat rate between London and San Francisco for westward freight is 35s per ton as against a rate of from 50s to 95s per ton from London to New York, and the direct shipments, once on board ship, incur no further charges except a small toll of fifteen cents per ton upon arrival at their destination.

The question whether the attractions of the California market to the British exporter and the advantages he now enjoys are likely to prove reasonably permanent has been raised, and the British Consulate has expressed the opinion that because of his ability to ship cheaply *via* the Panama Canal, the British exporter is likely to retain the advantages which are now his. To make that certain, several plans of campaign are suggested for the appointment of separate agents for the main areas of the United States, San Francisco being the logical center for representation on the Pacific Coast.

The attempt is in its early stages, but what progress has been made may be seen from the annexed table showing the value of wool manufactures imported into the Pacific Coast Customs Districts for the six months from January to June, inclusive. The total value for the four districts was \$177,943, divided as follows: Los Angeles \$12,953, San Francisco \$97,030, Oregon \$2,200, and Washington \$65,760. The table which shows the value for the monthly imports at the several ports of each kind of fabric imported, follows:

IMPORTS OF WOOL FABRICS INTO THE PACIFIC COAST CUSTOMS DISTRICTS
FROM JANUARY TO JUNE, 1923, INCLUSIVE.

| | Mohair Fabrics Woven or Knit | | Woven fabrics Wholly or in Chief Value of Wool or Other Hair | | | | Other Fabrics of Wool | |
|--------------------------------|---------------------------------|----------------|---|----------------|-------------------------------------|----------------|--------------------------|----------------|
| | | | Weighing not over 4 ozs. per sq. yd. | | Weighing over 4 ozs. per sq. yd. | | | |
| | <i>Pounds</i> | <i>Dollars</i> | <i>Pounds</i> | <i>Dollars</i> | <i>Pounds</i> | <i>Dollars</i> | <i>Pounds</i> | <i>Dollars</i> |
| JANUARY: | | | | | | | | |
| Los Angeles | 755 | 2,249 | ... | ... | 50 | 189 | ... | ... |
| San Francisco | ... | ... | 108 | 159 | 4,777 | 14,471 | ... | ... |
| Oregon | ... | ... | 22 | 54 | 177 | 770 | ... | ... |
| Washington | ... | ... | ... | ... | 4,142 | 9,892 | ... | ... |
| FEBRUARY: | | | | | | | | |
| Los Angeles | ... | ... | 270 | 755 | 1,784 | 3,183 | ... | ... |
| San Francisco | ... | ... | ... | ... | 7,032 | 21,773 | ... | ... |
| Oregon | ... | ... | ... | ... | 8 | 49 | ... | ... |
| Washington | ... | ... | ... | ... | 1,775 | 5,146 | ... | ... |
| MARCH: | | | | | | | | |
| Los Angeles | 8 | 12 | ... | ... | 200 | 1,030 | 502 | 1,786 |
| San Francisco | ... | ... | ... | ... | 3,293 | 8,821 | ... | ... |
| Oregon | ... | ... | ... | ... | 139 | 593 | ... | ... |
| Washington | ... | ... | 57 | 222 | 3,027 | 8,201 | 691 | 1,635 |
| APRIL: | | | | | | | | |
| Los Angeles | ... | ... | 374 | 964 | 225 | 684 | ... | ... |
| San Francisco | 226 | 737 | 360 | 1,021 | 5,900 | 17,693 | ... | ... |
| Oregon | ... | ... | ... | ... | 113 | 603 | ... | ... |
| Washington | ... | ... | ... | ... | 3,811 | 10,838 | ... | ... |
| MAY: | | | | | | | | |
| Los Angeles | ... | ... | ... | ... | 107 | 346 | ... | ... |
| San Francisco | 150 | 402 | 118 | 373 | 7,140 | 15,820 | ... | ... |
| Oregon | ... | ... | ... | ... | 55 | 131 | ... | ... |
| Washington | ... | ... | 4,008 | 12,443 | 3,930 | 10,660 | ... | ... |
| JUNE: | | | | | | | | |
| Los Angeles | ... | ... | 1,005 | 1,755 | ... | ... | ... | ... |
| San Francisco | ... | ... | 7,501 | 15,760 | ... | ... | ... | ... |
| Oregon | ... | ... | ... | ... | ... | ... | ... | ... |
| Washington | ... | ... | 2,799 | 6,723 | ... | ... | ... | ... |
| TOTAL: | | | | | | | | |
| Los Angeles | | | | \$12,953 | | | | |
| San Francisco | | | | 97,030 | | | | |
| Oregon | | | | 2,200 | | | | |
| Washington | | | | 65,760 | | | | |
| Grand Total for all Districts, | | | | \$177,943 | | | | |

COMPETITION FROM A REHABILITATED FRANCE.

WHAT often seem to be great catastrophies, carrying in their wake destruction and losses so immense as apparently to be irreparable, frequently prove to be blessings in disguise for the ultimate good of the afflicted city or country.

This has been proven true of Chicago, supposed to have been greatly retarded in growth by its great conflagration of 1871. Likewise a large portion of Boston's business district was destroyed in 1872, but it was soon rebuilt with more substantial buildings on better and more modern lines. So, too, a greater San Francisco arose from the ruins caused by earthquake and fire. The same was true of Charleston, Baltimore, Salem, Chelsea and many other communities. And such is to be the experience of the devastated industrial portions of France, which, with factories reconstructed and equipped with modern machinery, are planned by their rebuilders to become active and efficient contenders for their full share of the world's trade.

What these preparations are, few in this country know, the general impression being that, because France is neglecting to pay her foreign debts caused by the war, she is financially unable to re-equip herself for what was always a keen contest and which will become all the keener with the full rehabilitation of France and Germany. What France has been doing in the years since the armistice, was recently so well set forth by Mr. Lloyd George in the British Parliament that it is herewith reproduced. In the debate on Socialism in July last Mr. George, discussing the socialist resolutions and referring to the Ruhr situation said:

"The moment that peace is restored in Europe and exchanges are stabilized, you will find yourselves face to face with real rivalry and competition. France has not been rebuilding her devastated areas. She has reconstructed them. She has built factories on the newest modes, introduced machinery of the latest invention, constructed new docks and re-equipped old ones, widened and deepened canals, constructed new railways and electrified old ones, and created new power. Her mercantile marine has been increased by over one million tons, and her exports are over 100 per cent of the pre-war period. I could not read without a sense of amusement one paragraph in M. Poincaré's speech, where he denounced the immorality of Germany in spending money upon constructing new canals when she owed money to other people. A new France has sprung up, not out of the ruins of the old, but out of the devastation of a single province. She has increased enormously her capacity for production of the very things we are selling foreign markets. In Germany, the same thing has happened. They are all ready for the great developments which may take place when the settlement comes."

A perusal of the above extract will show that the wool manufacturers of this country will meet with keener competition than in past years from France with renewed and re-equipped textile mills, able at this moment to disconcert British wool manufacturers by prices which can be met by them neither in British markets nor in the markets of the world.

The same preparation is being made in Germany, undevastated and comparatively untaxed, to enable such competition to be successfully carried on by her industries. According to a German correspondent of the *London Times*, Americans are at the present time meeting in Mexico "with strong German competition in toys, fancy goods and millinery." It is also stated that the German steamship lines, notwithstanding the losses caused by the war, "are rapidly regaining their pre-war position in South American shipping, three-quarters of the trade with Buenos Aires being carried in German ships."

It behooves the domestic wool manufacturer to note this preparation in foreign lands, the success actually achieved in England by France, to scan carefully the increasing tide of wool textile imports into this country and prepare to hold their own in this, the best market known in the world.

MOVEMENT IN BRADFORD FOR DUTIES ON IMPORTED TEXTILES.

It is not surprising that former ardent supporters of free trade, as the British have been for years, should be losing faith at this late date in the efficacy of that theory when applied to their present industrial conditions. It would sound strange to the ears of the Cobdenites of the eighties, who tried desperately but unsuccessfully to induce the voters of this country to discard protective tariff rates and accept free trade, to hear the two resolutions recently adopted by the Bradford Chamber of Commerce. One recommends that the approaching Imperial Economic Conference "should consider the advisability, where the Empire holds a monopoly, of placing an export tax on such raw products as are exported to countries outside the Empire." The other instructs the Secretary of the Chamber of Commerce "to apply to the Board of Trade for the appointment of a committee (as provided for in the safeguarding of Industries Act, Part II) to inquire into the cause of unemployment in the Bradford woolen and worsted trade; furthermore, that this council hereby appoints a special committee to collect and lay before the Board of Trade the requisite evidence and statistics in support of their appeal."

The reason for this unexpected action in the stronghold of free trade is that for various reasons Bradford's woolen and worsted manufacturers are being undersold both in the foreign and domestic markets by continental rivals. As a result, there is widespread unemployment and "the outlook for the coming winter", as the *Manchester Guardian* says, "is black indeed." The sponsor of the resolution in advocating its adoption declared that "Bradford is suffering unemployment today because women are wearing French cloths," and though "it would be said that an import duty had always to be paid by the country which imposed it, they had better pay their money in that way and provide wages for the employ-

ment of their own people than pay their money in doles." Today, the voice of the free trader does not dominate the situation in Britain and it is not persuasive amidst the demands for measures to protect her workers from idleness and her textile industries from competition which can not be met by her manufacturers. The present day advocacy of such measures as the placing by the colonies of an export duty on their wool product and the imposition of a duty to protect the industries of Bradford, is justification for the refusal of our people a half century ago to accept what then was urged as a great boon for this country. Had we done so, could the *Manchester Guardian* have said of us, as it did in its issue of September 13, 1923, that "the conditions now ruling the state of trade in the United States of America should be carefully studied by all British manufacturers?" "We have learnt during the past year that the United States is sufficiently complete an economic unit to enjoy a healthy trade activity all by itself, while other nations look on with envy." Is not our great all-round development during the past fifty years evidence of the wisdom of the advocates and supporters of the protective tariff which has made possible that development and our industrial strength now recognized throughout the world, and does it not justify the adoption of that policy by the country?

UNEMPLOYMENT IN GREAT BRITAIN.

THE state of British trade is so bad that the question of unemployment is becoming a serious one and is being used by socialists and the Labor party to criticize the Government for insufficient activity to counteract the growing tendency and furnish work for the increasing numbers of the jobless. They have had three winters of unsatisfactory industrial inactivity and are facing a fourth "and worse one in sight, with the persistence of a vast volume of unemployment."

At a conference of textile workers held in Blackpool the last of July, the president referred to present conditions in the cotton trade as "worse than at any previous time", the only policy of the Employers Federation seeming "to be one of short and still shorter time." "Some of the cotton trade unions," he said, "suspended unemployment pay months ago." Returns for the textile towns show how bad conditions are. The *Yorkshire Post* of August 10 stated that "within the past three months the figures for Bradford were as low as 4000, but since then they have risen alarmingly. In the last week in July there were in Bradford 8429 persons wholly unemployed and 4356 on short time, a total of 12,785. Omitting returns from a few local offices, the total in the whole division for the week ended August 6 was 232,698; 216,350 wholly unemployed and 16,348 on short time."

How bad conditions have been for more than three years may be understood from the relief paid out of the unemployment insurance fund. When the inflated bubble burst in 1920, the fund had a reserve of £22 millions in

addition to current contributions. Between November, 1920 and August, 1922, a period which included two winters, the disbursements from the fund were more than £90 millions and the receipts from all sources, contributions from workers, employers, and the state, were £56 millions. Since the autumn of 1920 the payments have been £141½ millions and the income £105 millions. The surplus of £22 millions has been disbursed and a debt of £15 millions has been incurred.

Controversy as to the causes of the depression, the *London Times* says, "is not helpful, but it is clear," it further says, "that the delicate machinery of international commerce was thrown entirely out of gear by the war, and since this country is absolutely dependent upon its foreign trade for the means to feed its population and to find its workers employment, there can be no real relief until by some means the rehabilitation of the world again provides an outlet for the products of British workshops and factories." So many highly skilled men are being attracted to this country by the high wages received in various trades that concern is felt about this unexpected trend. Should it continue, the *Times* declares that "the general standard of efficiency on which the prosperity of British trade depends will be seriously diminished."

The situation is so disturbing that many schemes for carrying on large public works, the construction of the bridge in Nigeria and the largest bridge in the world across Sydney harbor have been advocated, together with all manner of local undertakings. The Government has agreed to assist local authorities to carry out schemes of a revenue producing character by making advances of 50 per cent on interest charges on loans up to fifteen years. It stands ready to do the same thing for public companies carrying on the same class of work and willing to accept the Government's conditions as to repayment and limitation of dividends during the life of the loan.

The real and lasting cure for unemployment, Prime Minister Baldwin says, "lies in the restoration of stable conditions throughout the world and in the development of new markets." With the German mark up to 30,000,000, the French franc more than 80 and the Belgian franc more than 103 to the pound sterling, the consumation of the Premier's standard and his cure does not seem to be particularly encouraging or imminent.

THE WAR'S EFFECT UPON THE TEXTILE INDUSTRIES OF GREAT BRITAIN.

THERE has been considerable discussion as to the actual expansion of textile machinery in the manufacturing countries of the world caused by the war, the impression being that a more than normal rate was maintained from 1914 to 1919.

A special correspondent writing in a recent number of the *Manchester*

Guardian on "Textile Manufacturing Capacity" discussed his subject under three heads:

(1). To what extent has the number of active spindles and looms been increased or otherwise?

(2). Has any increase in production been brought about by improved routine methods, better internal organization, the adoption of improved machinery in manufacturing operations?

(3). Precisely what is the effect of the adoption of the 48 hour week?

Unfortunately, except in the cotton manufacture, there are no published figures of expansion in machinery equipment. According to those issued by the International Cotton Spinners' Federation, it was estimated that there are in the United Kingdom 56,613,329 active spinning spindles, compared with 55,652,820 spinning spindles in 1913—a gain of approximately a million spindles in ten years, compared with a gain of fourteen million in the decade between 1903 and 1913, which includes the great expansion during the prosperous years of 1906 and 1907. During the thirty years between 1883 and 1913, about nineteen million new spinning spindles were installed, an average of more than six million per decade, while during the war and the years immediately following, the normal expansion was retarded by about five million spindles. There has been a similar expansion in the cotton weaving industry, the total number of cotton looms returned in Lancaster for 1923 being 795,244, a gain of only 9,000 in the last ten years, compared with a gain of 276,200 looms in the thirty years from 1883 to 1913, or only about one-tenth the normal rate maintained in the earlier decades.

The writer says that while some expansion took place in the woolen and worsted industries, no published statistics are available to show the definite results. Whatever the expansion, it was due more to replacements and small additions, than to new mill construction. War conditions were against new construction and such increase as was made necessary by the heavy demand for wool textiles, was met by replacing old or partly worn machines by more modern types, capable of better and larger production. It has been computed, he says, that the net increase in manufacturing capacity of these changes is "about equal to making good the loss due to the reduction of hours from 55½ to 48 per week."

While the full effect on the productive capacity of the textile industry has not been thoroughly tested owing to unfavorable conditions, there is, the writer says, "enough evidence to support the view that productive capacity has been reduced almost in direct proportion to the reduction in the number of hours. * * * In the textile industries, while the skill of the operatives counts for much, the predominant factor in production is the machine." As its speed is determined by other considerations than the number of hours it is run, it is obvious that there must be a loss of production due to fewer working hours. The best that can be expected, he says, "is a slight increase in hourly production due to the greater freshness of the operatives, which can only be realized with all the machinery in full production." Meanwhile, it must be assumed, he says,

"that the adoption of the 48 hour week has reduced the productive capacity of the textile industries to the extent of 13½ per cent." If this is correct, it will be necessary, according to a calculation made by the Secretary of the Oldham Master Cotton Spinners' Association, to erect in Great Britain more than eight million spindles to restore the country's pre-war productive capacity in cotton yarns alone.

WOOL MANUFACTURE DURING THE WAR.

Few persons have given more than a passing thought to the stupendous tasks undertaken by the managers of American industries whose duty it was during the war against Germany to keep the country's immense armies, both in the United States and France, supplied with the countless commodities necessary for their health, their existence and the defeat of Germany's legions.

Fortunately the presentation of the record made in all branches of industry was undertaken before the men who participated in this work passed from the stage. In a volume entitled, "Industrial America in the World War", just off the press, Mr. Grosvenor B. Clarkson, former director of the United States Council of National Defense and its Advisory Commission, as well as former chairman of the Interdepartmental Defense Board, has put into permanent form the truly great record made principally by men who received no salaries for their unceasing and untiring labors. For the entire period of the war, Mr. Clarkson held a key position behind the scenes and had the fullest opportunity, therefore, to know accurately what results were secured, to consult official records, confer with leading participants in the work and to write the story with great skill and accuracy.

One of the important divisions was the one producing clothing for the soldiers on the firing lines in France, in the camps in this country and for the civilian population. "None, but the great textile manufacturers and dealers", he writes, "could apply business acumen to the expenditure of something like two billion dollars for clothing, tentage and miscellaneous textile equipment of the armies." Put on their honor, the author records that "these men rose above personal considerations, above trade friendships and group loyalties, forgot personal gain and served unswervingly the interests of the Government and the Nation. Taken from the sellers and producers and placed on the side of the buyer and consumer, they never doubted for a moment what their duty was or hesitated for an instant in following its commands."

That—"the incorruptibility of the American business man commandeered for Government service," he says, "is really the big thing of the war in the textiles—not the millions of garments produced or the billions of yards of cloth woven." With such high principles governing the actions of the men controlling the distribution of wool supplies and their manufacture, there

could not be a repetition of the scandals of 1860-1865 over the production of unsatisfactory fabrics for soldiers' coats and uniforms. "The handling of the wool and woolen business", he says, "was necessarily in the hands of the trade. Those men who joined the Government are honored for their loyalty to their transformed allegiance and their fellows with whom they dealt are entitled to great credit for their cordial co-operation."

THE CARL FORSTMANN MEMORIAL FOUNDATION.

MR. and Mrs. Julius Forstmann of Passaic, New Jersey, recently announced to the Employes' Representative Assembly of the Forstmann and Huffmann Company, of which Mr. Forstmann is president, the establishment of a \$250,000 Foundation in memory of their son, Carl Edward Forstmann, who died on August 7, 1922 from injuries received when his automobile collided with a one-man trolley car in Passaic.

The young man had entered the mills of the Forstmann and Huffmann Company, where he started on the lowest round of the ladder, hoping by study and work to secure a thorough knowledge of the intricate processes of the woolen and worsted industries, an undertaking which, because of his earnestness and adherence to high standards, he would have carried to success, had his life been spared.

While he had only started on his charted career, "this Foundation in his memory will perpetuate the truer, greater and nobler expression of the life he had but begun." As expressed in the charter which empowers its trustees "to engage without profit in educational, scientific and charitable activities", its primary purpose is "to assist boys and young men of ability, character, and promise, whose financial circumstances make impossible the proper development of their powers and the fulfillment of their ambitions to attain, through such assistance, to a large measure of self-realization and social usefulness, and thereby at the same time to perpetuate the influence for intelligence, integrity and industry that would have been Carl Forstmann's had he been permitted to live and to make full use of the qualities and the opportunities that were his."

The general scope of the Foundation and the specific purposes for which grants will be made include (a) education or training of any grade, degree, or kind; (b) the prosecution of useful experimentation or research; (c) physical correction or rehabilitation; (d) the realization of any particularly worthy ambition which, with assistance, offers a strong likelihood of success. The restrictions are that "assistance is to be given only where the specific purpose, for the achievement of which assistance is asked, can not be achieved except under conditions of undue hardship and only where it is shown that the applicant and his immediate family have evidenced a sincere desire to make this achievement possible." The Foundation imposes no restrictions as to place of residence of applicants for assistance, but it does provide that other conditions being equal,

preference is to be given (a) to employes or to members of the families of employes of the Forstmann and Huffmann Company; (b) to employes or to members of the families of employes of other industrial establishments of the Passaic district; (c) to other persons of Passaic and vicinity, including particularly Clifton and Garfield; (d) to persons elsewhere.

The trustees of the Fund are Mr. Robert H. Montgomery, New York City; Mr. William F. Laporte and Mr. Julius Forstmann, Passaic.

The Committee on Awards and Loans are the Rev. William Doidge, Mr. Isaac W. England, of the Passaic Metalware Company, Charles F. Lodor, principal of the First Public School, and Mr. Richard J. Scoles, president of the Passaic National Bank, all of Passaic, and Mr. Robert M. Reinhold of the Forstmann and Huffmann Company, Rutherford, N. J.

By this splendid memorial Mr. Forstmann, who understands the necessity of scientific training for the successful continuance and further development of the country's wool manufacture, will not only perpetuate the memory of a promising son, but will open opportunities for fine careers to many poor but ambitious lads who will remember with gratitude all their lives the boundless charity of their benefactor.

OFFICIAL STANDARDS OF THE UNITED STATES FOR GRADES OF WOOL.

For many months, officials of the Bureau of Agricultural Economics worked upon the task of preparing standard grades of wool which, under the Warehouse Act, the Secretary of Agriculture was authorized to establish and promulgate if they met his approval.

These standards were submitted under date of May 7, 1923 to the Honorable Henry C. Wallace, Secretary of Agriculture, who approved them on May 18, 1923 and on July 13, 1923 made them public as the official wool standards of the United States, to be effective as of July 1, 1923. They are divided into eight sections as follows:

VARIOUS TERMS ADOPTED AND EXPLAINED.

SECTION 1. Grade fine.—Fine shall be wool which in diameter of fiber is not greater than the sample marked "fine" of a series of samples in the custody of the U. S. Department of Agriculture in the District of Columbia in a container marked "original official wool standards of the United States, grades."

SECTION 2. Grade one-half blood.—One-half blood shall be wool which in diameter of fiber is greater than the sample marked "fine" but not greater than the sample marked "one-half blood" of a series of samples in the custody of the United States Department of Agriculture in the District of Columbia in a container marked "original official wool standards of the United States, grades."

SECTION 3. Grade three-eighths blood.—Three-eighths blood shall be wool which in diameter of fiber is greater than the sample marked "one-

half blood" but not greater than the sample marked "three-eighths blood" of a series of samples in the custody of the United States Department of Agriculture in the District of Columbia in a container marked "original official wool standards of the United States, grades."

SECTION 4. Grade one-fourth blood.—One-fourth blood shall be wool which in diameter of fiber is greater than the sample marked "three-eighths blood" but not greater than the sample marked "one-fourth blood" of a series of samples in the custody of the United States Department of Agriculture in the District of Columbia in a container marked "original official wool standards of the United States, grades."

SECTION 5. Grade low one-fourth blood.—Low one-fourth blood shall be wool which in diameter of fiber is greater than the sample marked "one-fourth blood" but not greater than the sample marked "low one-fourth blood" of a series of samples in the custody of the United States Department of Agriculture in the District of Columbia in a container marked "original official wool standards of the United States, grades."

SECTION 6. Grade common.—Common shall be wool which in diameter of fiber is greater than the sample marked "low one-fourth blood" but not greater than the sample marked "common" of a series of samples in the custody of the United States Department of Agriculture in the District of Columbia in a container marked "original official wool standards of the United States, grades."

SECTION 7. Grade braid.—Braid shall be wool which in diameter of fiber is greater than the sample marked "common" and which approximates the sample marked "braid" of a series of samples in the custody of the United States Department of Agriculture in the District of Columbia in a container marked "original official wool standards of the United States, grades."

SECTION 8. For the purposes of grading; wool in the fleece shall be designated by the grade of the largest proportion of the fibers of the fleece.

In the circular promulgating the standards, officials of the Bureau of Agricultural Economics issued a statement to explain the necessity for them and the work done in their development. It was as follows:

REASONS FOR WOOL STANDARDS.

The establishment of the standards herein defined is a result of investigations conducted by the Department of Agriculture in the development of standards for the principal value determining properties of wool.

These properties, or factors, are: (1) diameter of fiber, (2) length of fiber, (3) spinning quality of fiber, and (4) shrinkage of wool.

Since there is a more or less consistent relation between fineness of wool and the variations in the other factors, diameter of fiber is regarded as basic; and, in the investigations conducted, has been given primary consideration.

The advisability of having standards for agricultural products is no longer a debatable point. Widened markets have placed a limitation on the personal contact once necessarily existing between buyer and seller. By providing a common language between the parties to a transaction and by making possible an understanding as to the precise character, quality, and condition, of a product, standards facilitate trading, and tend to diminish or eliminate the necessity of purchase by inspection or by sample.

The need for wool standards has long been recognized. Prior to the time when the Department of Agriculture was in position to undertake the wool standardization work, suggestions were received from several large organizations that the department take steps to create standards for wool, and to issue copies of such standards for use in commerce.

SITUATION DURING WAR.

- During the world war the lack of wool standards was especially noticeable. Government contracts for materials made wholly or partly of wool were, in the matter of the specifications for the wool, interpretable in terms only of the varied and arbitrary standards then in use.

In consequence, difficulty was experienced not only in writing specifications, but in obtaining concurrence of opinion as to their interpretation. Likewise, in the work engaged in by this department looking to the improvement of wool marketing practices, it has repeatedly been found that wool standards are a requisite to its fullest attainment.

The efforts made by the Department of Agriculture to develop standards for wool have met with hearty indorsement and approval. When the work was undertaken dealers and manufacturers co-operated willingly by supplying samples of wool representing their ideas of market grades. The samples supplied were, in most instances, of the types actually used by the houses submitting them. In this way many hundreds of samples, embracing the many market grades, were collected for the department's use.

These samples were later assembled, examined, and studied by experts in the employ of the department. Representative staples were drawn from the samples, compared with others of the same stated grade, classified according to the diameter of the fibers, and mounted. A study of these classified samples revealed a pronounced overlapping of the grades and showed none of the grades or standards then existent to be acceptable to the trade as a whole.

Another classification of the samples was made in which all were arranged according to diameter of fiber, regardless of grade specified. By elimination of duplicates the number of samples representing the range in diameter of fiber, in almost equal gradations from the finest to the coarsest, was reduced to 26.

A sub-classification divided the range covered by the 26 samples into seven sections of approximately equal scope. A set of samples, duplicating the specimens of maximum diameter of fiber in each of the seven groups, was prepared and set up as a possible means of defining the lines of demarcation for the seven primary market grades.

On completion of the preliminary work the set of type samples was submitted to a number of wool and textile authorities called in conference to consider the proposed grades. As the reaction of the conference was favorable to the grades recommended, preparation of copies of the original set was begun.

THE TENTATIVE WOOL GRADES.

These sets, mounted in cabinets, and accompanied by appropriate descriptive matter and a table of measurements for a suggested classification of the grades according to length of staple, were made available for release as the "Tentative Wool Grades" of the Department of Agriculture.

Investigations to determine the practicability of the Tentative Wool Grades were conducted by (1) grading wool according to the Tentative Wool Grades, (2) submitting sets of the Tentative Wool Grades to authorities for criticism, (3) providing sets for use in demonstrational and educational work, and (4) holding public hearings for the discussion of the proposed grades.

During the shearing seasons of 1920, 1921, and 1922, several expert wool classifiers were engaged by the department in co-operation with the marketing bureaus and other agencies of a number of States, to test the Tentative Wool Grades in actual grading work. Several million pounds of wool were thus graded and sold on the basis of the grades made.

In order that those who were directly connected with the handling of wool in the markets might be given an opportunity to study the proposed

grades and submit their opinions of them, sets of the Tentative Wool Grades were sent to a number of wool dealers, wool manufacturers and others, with the following letter of transmittal:

A set of Tentative Wool Grades is being sent to you for your examination and criticism, as it is assumed that you are interested in the wool standardization work being done by this department and that you will co-operate with it in its effort to bring about a greater uniformity in wool grades and wool grading.

The Tentative Wool Grades are the proposed wool grade standards for the United States. They were formulated some time ago after a study had been made of the wool grades used in the principal markets of the country. For this study hundreds of dealers and manufacturers, at the request of the department, submitted samples of the grades used by them, or samples representing their ideas of the various market grades. A classification of these samples was subsequently made and became the basis for the Tentative Wool Grades.

Investigations to determine the practicability of the Tentative Wool Grades are being made. Considerable field work has been done in which large quantities of wool were graded according to the proposed grades. Many lots of the wool so graded have been followed to the terminal markets in order to ascertain the reaction of the purchasers on them. Supplementing these investigations, sets of the Tentative Wool Grades are now being sent to wool dealers and wool manufacturers in order that an opportunity may be given them to examine and criticize the grades before final standards are established.

The set being sent to you is similar to those heretofore distributed or used in field work. Please examine it and feel free to give your comments on it. If your general comments are not along the lines of the following questions, it would be appreciated if your reply would contain answers to them:

1. In your opinion is it feasible to have wool grade standards based on definite grade lines as shown in the Tentative Wool Grades? Do you think the samples in the set show what it has been attempted to show, namely, the maximum diameter of fiber advisable to include in the respective grades?
2. Have you any suggestions to make regarding terms used, the classes given, or the staple lengths shown in the table printed inside the cover of the box?
3. Would you buy wool graded according to the Tentative Wool Grades and suggested classes?

Not all of the replies contained answers to the foregoing questions; a tabulation of the replies according to the attitude toward the grades is therefore given:

| | | |
|------------------------------------|---------------|------------|
| Complete indorsement, 65 per cent | Noncommittal, | 7 per cent |
| Qualified indorsement, 24 per cent | Opposed, | 4 per cent |

Sets of the Tentative Wool Grades were sent on request to agricultural colleges, woolgrowers' associations, textile schools, wooltesting houses, wool and textile publications, banks in wool-growing and wool-marketing centers, agricultural extension workers, and others interested in wool and wool grading. From reports made to the department, the majority of the sets are in active use in presenting or demonstrating wool grades and wool grading. Their distribution is not only general throughout the United States, but on special request sets have been sent to Hawaii, Argentina, Australia, Czechoslovakia, Japan, South Africa, New Zealand, and Poland.

PUBLIC HEARINGS.

At the close of the field investigations in 1922 preparations were made for holding the public hearings on the Tentative Wool Grades so that final determination of the standards might be made. Hearings were therefore

arranged for and held in Boston, Mass., November 21, 1922; Philadelphia, Pa., November 23, 1922; Chicago, Ill., December 6, 1922; and in Washington, D. C., February 6, 1923. At these hearings, which were attended by producers, dealers, manufacturers, and others, the work accomplished was reviewed, the proposed grades and purposes of the work discussed, and criticism and suggestions invited. Indorsements of the grades were received from representatives of several branches of the industry and recommendations were made that the Tentative Wool Grades be declared official.

At the final hearing held in Washington the Tentative Wool Grades were indorsed and their establishment as standards according to American nomenclature was recommended by the Joint Committee on Research and Standardization, representing the National Association of Wool Manufacturers, by the American Association of Wool and Worsted Manufacturers, and by the National Association of Worsted Yarn Spinners. This committee further recommended that the department consult with authorities of the British wool and textile industries to the end that a correlation of the United States and British classifications could be effected, and a system of nomenclature worked out that would take cognizance of the wool, amounting to approximately 60 per cent of our consumption that is now imported.

FURTHER STANDARDIZATION WORK.

Since much finer distinctions must necessarily be made in wool for manufacturing purposes than are possible or essential in grading wool in the fleece, the recommendations of the Joint Committee on Research and Standardization will be followed and an effort made to develop a classification that recognizes the greater number of grades employed in the manufacturing industry.

Further steps in the standardization work are: (1) Development of a standard terminology for length, on which some progress has been made; (2) development of standards for spinning qualities of the fiber; and (3) development of standards for describing or indicating the shrinkage, degree of foreign matter, etc., in wool.

As these standards are developed their promulgation will follow.

CONFERENCE WITH BRITISH EXPERTS ON STANDARD WOOL GRADES.

SHORTLY after the official standard wool grades were established and promulgated by Secretary Wallace, Messrs. Lloyd S. Tenny, Assistant Chief of, and George T. Willingmyre, specialist in marketing wool, Bureau of Agricultural Economics, Department of Agriculture, went to England to confer with wool authorities there, collect information about British standardization of wool qualities, and try to bring about eventually some co-ordination of American and British wool standards.

Commenting on Mr. Willingmyre's visit to Bradford, the correspondent of the *Manchester Guardian* in that city stated that he had inspected the samples taken to England from this country and had been favorably impressed by them. The correspondent wrote that our terms one-half

blood, three-eighths blood and one-quarter blood "must have originated from the different crosses of sheep, and it is fairly eloquent of the influence of the growing end of the trade upon the manufacturing industry that terms more suggestive of crossbreeding than of the processes through which wool is put in the course of manufacture have become recognized." Believing that the English quality terms are well known in American wool trade circles, he said, "It would be to the advantage of all concerned if they were generally adopted in the United States."

The following table shows the American grades and their equivalent qualities according to the Bradford standard of judging, which is recognized in Australia, New Zealand and South America:

| Grade. | Range in length. (average). | American equivalent by grades. | Range in counts. |
|----------------------|--------------------------------|-----------------------------------|---------------------|
| Fine Combing | 2½ inches | Fine Delaine Fine Clothing | 60's-64's |
| Fine Medium Combing | Above 2¾ inches | ½ Blood Combing | |
| Fine Medium Clothing | Up to 2¾ inches | ½ Blood Clothing | 58's-60's |
| Medium Combing | Above 3 inches | ⅓ Blood Combing | |
| Medium Clothing | Up to 3 inches | ⅓ Blood Clothing | 50's-56's |
| Low Medium Combing | Above 3½ inches | ¼ Blood Combing | |
| Low Medium Clothing | Up to 3½ inches | ¼ Blood Clothing | 46's-50's |
| Low Combing | Above 4 inches | Low ¼ Blood Combing | |
| Coarse | Above 5 inches | Combing and Braid | 36's-40's |

Recognizing that a common standardization of qualities is desirable, the correspondent said that its establishment "will be by no means an easy matter, and even then only the fringe of the subject will have been touched, for length, spinning quality and shrinkage have all to be taken into account when judging wool for manufacturing purposes, and on these matters, as well as quality, it is quite easy to find very wide divergence of opinion. The principal point is that the quality terms commonly used in the English and colonial trade are more expressive of the spinning and manufacturing properties of wool than any others now in use and none better could be introduced."

If the nomenclature is to be uniform on both sides of the Atlantic, it would of course mean, says the *Bradford Wool Chart*, "the dropping of the present system in the States of describing wool as fine, half-blood and so on."

Mr. Willingmyre secured in Bradford, samples of greasy wool of all qualities from 36's to 80's which after being prepared and regraded were approved by the Topmaking Committee of the British Wool Federation "as representative average standards of quality ruling in the Bradford trade, while those samples should give any American user a very good idea", according to the *Bradford Wool Record and Textile World*, "of what a Bradford 50's or 70's is like. They give no guaranty that any firm's 50's or 70's will be exactly as represented in the samples. As is well known, some firms specialize in making specially good tops and such individual variations have all been averaged. If the scheme of standardization results in uniformity in the descriptions of wool on both sides of the Atlantic and the abolition of such purely American terms as half-blood, quarter-

blood, braid, etc. in international trade, it will be a big step towards a better mutual understanding between the wool using industries."

The above quoted extracts from British publications are in accord with the advice given by the president of the National Association of Wool Manufacturers, when speaking for the Joint Committee on Research and Standardization of the several wool manufacturing associations at the conferences held in the years 1922 and 1923 under the auspices of the Department of Agriculture. The Joint Committee anticipated the identical points raised by the English publications and made recommendations for the continuance of the work exactly in line with the suggestions given at the conferences with the British wool authorities. As a matter of record, the remarks made at the conference in Washington on February 6, 1923, in which were summarized the recommendations made on behalf of the Association, are herewith reproduced. At that conference Mr. Wood said:

"The work of standardization of terminology for wool grades should be undertaken in five successive steps.

"1. With respect to the distinctively American terms for fineness viz: Fine, medium, half-blood etc. This stage is now practically completed by the work the Department of Agriculture has been carrying on during the past five years.

"2. Standardization of the terminology for fineness according to the English numerical system 70's, 64's, 60's etc. This is the next step, and to be effective there should be co-operation with British authorities, so that the result will have official and trade sanction of Great Britain and the wool growing British dominions. This co-operation can probably be obtained through the Bradford Conditioning House and the Research Committee of the British Woolen Industry.

"3. The standard numerical nomenclature referred to above must then be accurately related to the Standard American terminology mentioned in paragraph 1. This is a work to be done by the experts and microscopists of the Bureau of Standards and Department of Agriculture in collaboration. When completed, each American term will definitely bracket certain of the numerical designations, and either or both terminologies can be employed according to individual preference, the broader grouping of the American system probably continuing in use in primary transactions in domestic fleece wool, and the numerical system superseding it for all other purposes.

"After the standardization of the terms pertaining to fineness has been completed, the next step would be:

"4. The adoption of a standard terminology for length of staple.

"The final step would be:

"5. The preparation of a standard terminology to indicate qualities, or degrees of departure from normal quality, something, for example, that would be more definite and logical than the Australian 'free', 'practically free', 'nearly free', etc.

"Each of these steps should be successively completed, a standard agreed upon and set up before proceeding to the next step, so that the trade may have the advantage of whatever has been accomplished before

the completion of the whole program, which might take quite a number of years."

The *Daily News Record* of February 10, 1923 printed a letter from Mr. Wood which contained in slightly condensed form what he had outlined at the conference as the steps necessary to be taken. It is evident, therefore, that the advice given at the conference by the representative of wool manufacturing interests was to the point and invaluable to the representatives of the Department of Agriculture.

In fact, the Joint Committee recognized, as the representatives of the Department, unacquainted with manufacturing problems could not, the obstacles to be surmounted. Having a definite conception of the extent of the undertaking and the difficulties to be overcome, they laid down a program of procedure to bring about the adoption of wool grades and terms which could be adopted by other countries and be understood and used alike by wool growers, wool merchants, and wool manufacturers.

At the invitation of the Department of Agriculture, the National Association of Wool Manufacturers named as its representative at the contemplated conferences in England, Mr. Marland C. Hobbs of Boston. Unfortunately Mr. Tenny and Mr. Willingmyre sailed for England before Mr. Hobbs and Mr. P. H. Bates, Chief of the Division of Structural and Engineering Materials, Department of Commerce, could join their party, and Mr. Hobbs was obliged later to undertake alone certain essential things left undone by Mr. Willingmyre. Commenting in the *Bradford Wool Record and Textile World* of September 20 on the presence of Mr. Hobbs in Bradford, the editor said:

"The steps taken recently by Mr. G. T. Willingmyre (representing the Department of Agriculture, Washington) to obtain standard samples of wool in Bradford was only the initial move in the development of a scheme of co-ordination between the wool textile industry of this country and that of the United States. Questions relating to length of staple, spinning qualities, and other matters will be dealt with in due course, and it is hoped that the investigation will ultimately lead to the removal of certain obstacles encountered in international trade. At the present time Mr. M. C. Hobbs, representing the Joint Committee on Research and Standardization of the National Association of Wool Manufacturers, Boston, and other trade associations in America, is in Bradford, and is in touch with representatives of the various trade organizations of the city. It is expected that a committee will be set up here to work in conjunction with the American committee in developing a scheme, and with this object in view meetings and conferences are being held. At present no definite scheme has been brought forward, but it is probable that something will result from the discussions of the last few weeks."

It should be evident to the representatives of the Agricultural Department that, if this movement is to succeed, they must have the support of wool merchants and wool manufacturers both in this country and in England. At some later date Mr. Hobbs will no doubt make a report of the very important work done by him in London and Bradford.

TREASURY RULING ON CLASSIFICATION OF CORDOVA WOOL.

On July 1, 1923, Assistant Secretary McKenzie Moss of the Treasury Department, issued a decision refusing the contention of the Bigelow-Hartford Company that an invoice of Cordova wool should be classified under Paragraph 1101, rather than Paragraph 1102 of the new tariff law. The decision giving the facts in the case which are contained in a letter to Mr. Benjamin A. Levett of New York City, attorney for the company, is as follows:

"The Department refers to the conference held at your request on the 20th instant, in regard to the classification of certain wool shipped from Argentina, and to your letter of May 25th last, enclosing a brief in behalf of the Bigelow-Hartford Carpet Company, New York, in which, for the reasons stated therein, you urge that the wool be classified as Cordova wool under Paragraph 1101 of the Tariff Act rather than under Paragraph 1102, by virtue of the provision in Paragraph 1103.

"The Department submitted your brief to the United States Appraiser at New York for consideration and such comments as he desired to make. In his reply, dated June 22nd, referring to the statement in your letter of May 25th that this wool has been uniformly dealt in and known commercially for many years as Cordova wool, the Appraiser states that the wool under discussion is not of the kind that has been uniformly dealt in and known commercially for many years as Cordova wool, and the Appraiser states that the term Cordova wool is a commercial term for a carpet wool grown in the Cordova district. The Appraiser further states that in the Cordova district is a wool known as San Luis, and in some shipments of Cordova wool a small percentage of this wool, up to 7 per cent, may be found, and that wools with this small mixture of merino blood have all been passed for the reason that the Government standard jar 301 carries the same. The Appraiser states in this connection that the percentage of San Luis wool was not equal to 25 per cent of the wool in the bale.

"As to the packed wools under consideration, as well as wools received by other importers, the Appraiser expresses the opinion that they are deliberately packed by the shippers with crossbred South American wools, wools of merino (not San Luis) blood and also of English blood, and that quite a number of shipments can be found to be packed in layers, and that in some cases such wools (entirely different from Cordova) amount to as much as 40 to 45 per cent

"In regard to the third contention in your letter that the admixture of any so-called cross blood wool really depreciates and does not enhance the value of a bale of commercial Cordova wool, and that if such so-called cross blood wool were separately sold it would command a considerably less price than the natural Cordova wool, the Appraiser reports that it is his opinion that buyers, when they order Cordova wool, want Cordova wool and nothing else, but that it is conceded by carpet mills that the fine wools they find mixed with the Cordova are useful in their finer lines of carpets.

"It would appear from your letter and brief, as well as from the discussion at the two hearings held on the subject at the Department, that you base your application for the classification of the wool under Paragraph 1101 on the assumption that the wool is commercially known as Cordova wool following the rule well established by the courts that commercial designation controls the classification of imported merchandise.

"As stated above, the Appraiser at New York reports that the wool the subject of this correspondence, is not commercially known as Cordova wool but in the view taken by the Department of the issue involved it is not necessary to determine this question, for while commercial designation is a well recognized rule and ordinarily adopted in the classification of merchandise, the rule is subject to exception; Note T. D. 36424 and the decisions cited therein.

"The Tariffs Acts of 1890, 1897 and 1908 in the classification of wools, provided that the standard samples of all wools which were then or might thereafter be deposited in the customhouses under the authority of the Secretary of the Treasury should be the standards for the classification of wools under the respective acts mentioned. While a corresponding provision does not appear in the present Tariff Act the fact that the wools mentioned in Paragraph 1101 are similar to those enumerated in the acts mentioned, as of class 3, and the further fact that under Paragraph 1104 the Secretary of the Treasury is authorized and directed to prescribe methods and regulations for carrying out the provisions of the wool schedule relating to the duties on wool and hair, the Department is of the opinion that the classification of wool does not depend upon commercial designation but rather is controlled by the character of the wool itself, and that under the provisions of Paragraph 1104 the standard samples now in the customhouses should control the classification of wools imported into this country.

"In view of the foregoing, and as the Appraiser states that wools with a mixture of merino blood up to 7 per cent are classified under Paragraph 1101, for the reason that the Government standard jar 301 carries the same, the Department is of the opinion that wools of the character under consideration, packed to contain in excess of the 7 per cent, should be assessed with duty under Paragraph 1102, by virtue of the provisions in Paragraph 1103, and it must accordingly decline to authorize the liquidation of the entries under Paragraph 1101 of the Tariff Act."

(Signed) MC KENZIE MOSS.

Assistant Secretary.

COST OF LIVING AND WAGES REMAIN HIGH.

As the results of investigations conducted by the National Industrial Conference Board, it was announced in reports issued the latter part of September that both the cost of living and workingmen's wages remain at high figures. In brief, the wages were on a higher level for "real" earnings, as weighted with what they will buy, than at any time since

1914, not even excepting the "peak" period of 1920. The cost of living in July, the latest time when comprehensive figures were available for a survey of this magnitude, was 61.9 per cent above the 1914 level and this was a decline of 20.8 per cent from the high prices of July, 1920.

The item of rent in the average family budget last July was 75 per cent higher than in 1914, and higher than its former high mark of 71 per cent in the spring of 1921. There was an average increase in rents of three per cent between March and July in this year. Although rent inflation had subsided somewhat in the largest eastern cities, increases averaging 100 per cent or more since 1914 were recorded in thirty-two cities in the Middle West.

Clothing prices in July had declined 39 per cent since March, 1920 when they registered 177 per cent over those of pre-war days. During the past three years the decline in the cost of the average family's clothes was 36.3 per cent, and the net increase in the family clothing bill since 1914 was 70 per cent.

Along with the report on the cost of living, a report on wages, hours of labor and employment was also released. "Especially noteworthy" in that report, the Conference Board states, "is the decided advance in real earnings which establishes the contention of economists that the American workingman is better off today than he ever was before. During the first half of 1923 increased pay and a higher level of hours worked resulted in substantially increased earnings." The comparatively small increase in the cost of living for the same period increased the weighted or "real" earnings well above those during the peak months of 1920, in June hourly earnings being 40 per cent above the 1914 level and the weekly earnings 35 per cent higher.

RECENT WAGE CHANGES.

THE National Industrial Conference Board issued the following summarized statement of wage changes throughout the United States during the month ended September 14, together with similar changes for the preceding five months. The information is based upon data derived from newspapers, trade journals and unofficial reports, and should not be regarded, therefore, as an official report of the Conference Board. It is as follows:

| Date. | Reductions. | Increases. | Total Changes. |
|---------------------------------------|-------------|------------|----------------|
| Mar. 15, 1923 through April 14, 1923, | 0 | 229 | 229 |
| April 15, 1923 through May 14, 1923, | 1 | 201 | 202 |
| May 15, 1923 through June 14, 1923, | 1 | 287 | 288 |
| June 15, 1923 through July 14, 1923, | 0 | 137 | 137 |
| July 15, 1923 through Aug. 14, 1923, | 0 | 77 | 77 |
| Aug. 15, 1923 through Sept. 14, 1923, | 1 | 22 | 23 |

There was one reduction in the textile industry.

The following table shows the number of increases by industry and the range of increase for the past month:

| Industry. | Range of Increase. | Total number of increases. |
|---------------------------|---------------------------|----------------------------|
| Clothing, | \$5 to \$10 per week, | 1 |
| Coal (Anthracite), | 10% (2 year contract), | 1 |
| Glaziers, | 5% to 18%, | 1 |
| Iron and Steel, | 10% for 10 hour day, | 2 |
| Leather, | 10%, | 2 |
| Railroads, | 1c per hr. to 3c per hr., | 10 |
| Street Railways, | Amount not given, | 1 |
| Teamsters and Chauffeurs, | \$5 per week, | 1 |
| Theatrical, | 7½% to 15%, | 3 |
| Total number increases, | | 22 |

Reductions in the hosiery mills in New Hampshire are due to cancelling the increase of 12% granted May 28, 1923. Most of the increases are due to renewal of contracts, some extending over a year and some a longer period of time.

PRINTING OF TABLE SHOWING IMPORTS ENTERED FOR CONSUMPTION DEFERRED.

It has been customary for us to print each year in this *Bulletin* a table of imports of wool manufactures entered for consumption either for the fiscal year or the calendar year. It is no longer possible to reproduce the former because within recent years its publication was discontinued by the Department of Commerce, and this year, to our regret, it is not possible to construct for our pages the table for the calendar year 1922, inasmuch as it has not yet been issued. Necessarily its appearance must be deferred until sometime in the year 1923.

HIGHEST PRICES FOR AUSTRALIAN MERINOS.

EXCEPT the season of 1920-21, the top prices reached for Australian merinos this season are the highest on record according to the table printed in the *Wool Record & Textile World*. In the season of 1920-21, exceptional prices were paid for a short time for super cuts, 46½d. being secured, but a marked decline soon followed. On the contrary, this season thousands of bales realized from 30d. to 38½d. per pound, it being stated that "there never was a season in wool history where such high prices were obtained for such large quantities of wool."

In the "boom" year of 1899 in pre-war days, the top price was 19½d, which was regarded as quite unusual. In 1915, after the war was begun, 23d. was touched, and each year the price increased until the appraisement agreement fixed the high point at 30¾d. This year the highest price was 38½d., approximately double the pre-war rate, and the query is: To what point will it go a year hence?

The following table, covering thirty years, gives a continuous record of the highest price reached each year. It is thought to be authentic and is here printed for preservation. The figures are as follows:

| Season | Greasy Merino Fleece. | Greasy Merino Lambs. | Greasy Merino Pieces. | Greasy Merino Bellies. | Scoured Merino Fleece. |
|--------------|-----------------------------|----------------------------|-----------------------------|------------------------------|------------------------------|
| | d. | d. | d. | d. | d. |
| 1893-94..... | 10 | 9 $\frac{3}{4}$ | 8 $\frac{1}{4}$ | 6 $\frac{1}{4}$ | 17 $\frac{1}{2}$ |
| 1894-95..... | 8 $\frac{3}{4}$ | 9 $\frac{1}{4}$ | 7 | 5 $\frac{3}{4}$ | 16 $\frac{1}{2}$ |
| 1895-96..... | 11 $\frac{1}{2}$ | 9 $\frac{1}{2}$ | 8 $\frac{1}{2}$ | 6 $\frac{1}{4}$ | 18 $\frac{1}{4}$ |
| 1896-97..... | 11 $\frac{3}{4}$ | 11 $\frac{1}{4}$ | 8 $\frac{1}{4}$ | 6 $\frac{1}{2}$ | 17 |
| 1897-98..... | 12 $\frac{1}{2}$ | 12 $\frac{3}{4}$ | 8 $\frac{1}{4}$ | 6 $\frac{3}{4}$ | 18 |
| 1898-99..... | 13 | 11 | 10 $\frac{1}{2}$ | 8 $\frac{3}{4}$ | 24 |
| 1899-00..... | 19 $\frac{1}{2}$ | 15 $\frac{1}{4}$ | 16 $\frac{1}{2}$ | 13 | 30 $\frac{1}{2}$ |
| 1900-01..... | 11 | 8 $\frac{3}{4}$ | 8 | 7 $\frac{1}{4}$ | 19 |
| 1901-02..... | 12 $\frac{3}{4}$ | 9 $\frac{1}{2}$ | 9 $\frac{1}{2}$ | 7 $\frac{1}{4}$ | 21 |
| 1902-03..... | 14 $\frac{1}{4}$ | 11 | 11 $\frac{3}{4}$ | 10 $\frac{1}{2}$ | 25 |
| 1903-04..... | 14 $\frac{1}{2}$ | 11 $\frac{1}{4}$ | 11 $\frac{3}{4}$ | 9 $\frac{1}{2}$ | 25 |
| 1904-05..... | 17 $\frac{1}{4}$ | 12 $\frac{3}{4}$ | 13 | 11 | 24 $\frac{1}{4}$ |
| 1905-06..... | 16 | 12 $\frac{1}{2}$ | 13 | 10 $\frac{1}{2}$ | 26 $\frac{1}{2}$ |
| 1906-07..... | 15 $\frac{3}{4}$ | 14 $\frac{1}{2}$ | 13 $\frac{1}{4}$ | 11 | 25 |
| 1907-08..... | 17 $\frac{1}{2}$ | 14 $\frac{1}{2}$ | 13 $\frac{3}{4}$ | 11 $\frac{1}{2}$ | 27 $\frac{1}{4}$ |
| 1908-09..... | 15 $\frac{3}{4}$ | 16 | 11 $\frac{3}{4}$ | 9 $\frac{3}{4}$ | 23 $\frac{1}{4}$ |
| 1909-10..... | 18 | 16 $\frac{1}{4}$ | 13 | 11 | 25 $\frac{1}{4}$ |
| 1910-11..... | 16 $\frac{1}{4}$ | 13 $\frac{1}{4}$ | 13 | 10 $\frac{3}{4}$ | 23 $\frac{1}{4}$ |
| 1911-12..... | 16 | 13 $\frac{3}{4}$ | 12 | 9 | 23 $\frac{3}{4}$ |
| 1912-13..... | 18 $\frac{1}{2}$ | 14 $\frac{1}{2}$ | 13 $\frac{1}{4}$ | 11 $\frac{1}{4}$ | 25 $\frac{3}{4}$ |
| 1913-14..... | 16 | 14 $\frac{3}{4}$ | 13 | 11 $\frac{1}{4}$ | 26 $\frac{3}{4}$ |
| 1914-15..... | 18 | 15 | 13 $\frac{3}{4}$ | 11 $\frac{3}{4}$ | 26 $\frac{1}{4}$ |
| 1915-16..... | 23 | 18 $\frac{1}{4}$ | 18 | 14 $\frac{1}{2}$ | 41 $\frac{1}{4}$ |
| 1916-17..... | 29 $\frac{1}{2}$ | 21 $\frac{3}{4}$ | 24 | 18 | 43 $\frac{1}{2}$ |
| 1917-18..... | 30 | 21 | 25 $\frac{1}{4}$ | 19 | 48 |
| 1918-19..... | 30 $\frac{3}{4}$ | 21 $\frac{1}{2}$ | 23 $\frac{3}{4}$ | 18 $\frac{1}{4}$ | 48 |
| 1919-20..... | 30 $\frac{3}{4}$ | 23 | 25 $\frac{1}{4}$ | 18 $\frac{1}{4}$ | 49 |
| 1920-21..... | 46 $\frac{1}{2}$ | 25 $\frac{1}{4}$ | 26 $\frac{1}{2}$ | 22 $\frac{1}{2}$ | 50 |
| 1921-22..... | 34 $\frac{1}{2}$ | 22 | 25 | 19 $\frac{1}{4}$ | 44 $\frac{1}{4}$ |
| 1922-23..... | 38 $\frac{1}{2}$ | 27 | 29 $\frac{1}{2}$ | 26 $\frac{1}{4}$ | 48 $\frac{3}{4}$ |

GOVERNMENT REGULATIONS FOR SCOURING WOOL.

ASSISTANT Secretary of the Treasury, McKenzie Moss, has sent to Collectors of Customs the following regulations for scouring wool, which are to be observed when importers appeal from the estimates of the clean content made by the customs officers:

"When there is a difference of opinion between the importer and the appraiser as to the estimate of clean content that shall apply to a certain lot of wool, the following rules and regulations governing the method of scouring wool must be used.

"Representative samples of the lot or lots on which there is a dispute shall be sent to a well known and properly equipped scouring plant, there to be scoured by the four or five-vat system, with water from 115 to 135 degrees Fahrenheit, and with the solutions properly adapted to the particular type of wool being scoured.

"Sample of scoured wool shall then be reduced to bone dry weight by the use of recognized standard apparatus, and 13 $\frac{3}{4}$ per cent regain added thereto, as determined by the Bureau of Standards.

"Results of the test must be reported in the form of a sworn affidavit that the scouring has been done in accordance with the above regulations.

"Expense of having scouring done shall be borne by the importer."

Regulations were made necessary by the Tariff Law of 1922 which imposes a duty on wool in the grease, or on the skin, based on the clean content thereof. So far but few appeals have been made.

BRADFORD'S NEW WOOL COMBING TARIFF.

THE following is the wool combing tariff effective August 27, 1923. The new rates showing reductions from those of July 18, 1921 and February 26, 1923 are compared with those in force on July 1, 1914 and September 20, 1920.

| | Aug. 27, 1923. d. | Feb. 26, 1923. d. | July 18, 1921. d. | Sept. 20, 1920. d. | July 1, 1914. d. |
|---------------------------------------|-------------------------|-------------------------|-------------------------|--------------------------|------------------------|
| Merinos | | | | | |
| Tearing 5 to 1 and over..... | 5 $\frac{1}{4}$ | 5 $\frac{1}{4}$ | 6 $\frac{1}{4}$ | 8 | 2 $\frac{1}{4}$ |
| Tearing 4 and under 5 to 1..... | 5 $\frac{3}{4}$ | 6 $\frac{1}{4}$ | 6 $\frac{3}{4}$ | 8 $\frac{1}{2}$ | 2 $\frac{3}{4}$ |
| Tearing 3 and under 4 to 1..... | 6 $\frac{1}{4}$ | 6 $\frac{3}{4}$ | 7 $\frac{1}{4}$ | 9 | 2 $\frac{1}{4}$ |
| Tearing 2 and under 3 to 1..... | 7 $\frac{1}{4}$ | 7 $\frac{3}{4}$ | 8 $\frac{1}{4}$ | 9 $\frac{3}{4}$ | 3 |
| Tearing under 2 to 1..... | 7 $\frac{3}{4}$ | 8 $\frac{1}{4}$ | 8 $\frac{3}{4}$ | 10 $\frac{1}{4}$ | 3 $\frac{1}{4}$ |
| Burring..... | 4 | 1 extra | 1 extra | 1 extra | extra |
| Gilling in..... | 4 | 1 extra | 1 extra | 1 extra | extra |
| Dry Combing..... | 4 | extra | extra | extra | — |
| Cape Wools..... | 4 | extra | extra | extra | — |
| 58's | | | | | |
| Tearing 12 to 1 and over..... | 4 $\frac{1}{4}$ | 5 $\frac{1}{4}$ | 5 $\frac{3}{4}$ | 7 $\frac{1}{4}$ | † |
| Tearing 8 and under 12 to 1..... | 5 | 5 $\frac{1}{2}$ | 6 | 7 $\frac{1}{4}$ | † |
| Tearing under 8 to 1 same as Merinos. | | | | | |
| Burring..... | 3 $\frac{3}{4}$ | 1 extra | 1 extra | 1 extra | — |
| Gilling in..... | 4 | extra | extra | extra | — |
| Dry Combing..... | 4 | extra | extra | extra | — |
| 56's | | | | | |
| Tearing 7 to 1 and over..... | 4 $\frac{1}{2}$ | 4 $\frac{1}{2}$ | 5 $\frac{1}{2}$ | 6 $\frac{1}{2}$ | 1 $\frac{1}{2}$ |
| Tearing 5 and under 7 to 1..... | 5 | 5 $\frac{1}{2}$ | 5 $\frac{3}{4}$ | 7 | — |
| Tearing under 5 to 1..... | 5 $\frac{1}{2}$ | 5 $\frac{3}{4}$ | 6 $\frac{1}{4}$ | 7 $\frac{1}{2}$ | — |
| Lime and Chemically treated Skin | | | | | |
| Wools..... | 1 | extra* | extra* | extra* | — |
| Burring..... | 1 | extra | extra | extra | extra |
| Gilling in..... | 1 | extra | extra | extra | extra |
| Dry Combing..... | 1 | extra | extra | extra | — |
| 48's and 50's | | | | | |
| Tearing 7 to 1 and over..... | 4 $\frac{1}{2}$ | 4 $\frac{1}{2}$ | 4 $\frac{1}{2}$ | 5 $\frac{1}{2}$ | 1 $\frac{1}{2}$ |
| Tearing 5 and under 7 to 1..... | 4 $\frac{1}{2}$ | 4 $\frac{1}{2}$ | 5 $\frac{1}{2}$ | 6 $\frac{1}{2}$ | 1 $\frac{1}{2}$ |
| Tearing under 5 to 1..... | 5 | 5 | 5 $\frac{1}{2}$ | 6 $\frac{1}{2}$ | 2 |
| Lime and Chemically treated Skin | | | | | |
| Wools..... | 1 | extra* | extra* | extra* | — |
| Burring..... | 1 | extra | extra | extra | extra |
| Gilling in..... | 1 | extra | extra | extra | extra |
| Dry Combing..... | 1 | extra | extra | extra | — |
| 30's to 46's | | | | | |
| Tearing 8 to 1 and over..... | 3 $\frac{3}{4}$ | 4 | 4 $\frac{1}{4}$ | 5 $\frac{1}{4}$ | 1 $\frac{1}{2}$ |
| Tearing 6 and under 8 to 1..... | 4 $\frac{1}{4}$ | 4 $\frac{1}{2}$ | 4 $\frac{1}{4}$ | 5 $\frac{1}{4}$ | 1 $\frac{1}{4}$ |
| Tearing under 6 to 1..... | 4 $\frac{1}{4}$ | 5 | 5 $\frac{1}{4}$ | 6 $\frac{1}{4}$ | 1 $\frac{3}{4}$ |
| Lime and Chemically treated Skin | | | | | |
| Wools..... | 1 | extra* | extra* | extra* | — |
| Burring..... | 1 | extra | extra | extra | extra |
| Gilling in..... | 1 | extra | extra | extra | extra |
| Dry Combing..... | 1 | extra | extra | extra | — |
| Carding, Backwashing and Gilling | | | | | |
| only..... | 3 $\frac{3}{4}$ | 3 $\frac{3}{4}$ | 3 $\frac{3}{4}$ | 4 $\frac{1}{4}$ | 1 $\frac{3}{4}$ |
| Lime and Chemically treated Skin | | | | | |
| Wools..... | 1 | extra* | extra* | extra* | — |
| Preparing..... | 1 | extra* | extra* | extra* | — |
| 32's, 36's, 40's..... | 3 $\frac{1}{4}$ | 3 $\frac{1}{4}$ | 3 $\frac{1}{4}$ | 4 $\frac{1}{2}$ | 1 $\frac{1}{4}$ |
| 44's and 46's..... | 3 $\frac{1}{4}$ | 3 $\frac{1}{4}$ | 4 | 4 $\frac{1}{2}$ | 1 $\frac{1}{4}$ |
| 48's and 50's..... | 3 $\frac{1}{4}$ | 4 | 4 $\frac{1}{2}$ | 5 | 1 $\frac{1}{4}$ |
| Lime and Chemically treated Skin | | | | | |
| Wools..... | 1 | extra* | extra* | extra* | extra |
| Burry and Seedy Wools..... | 1 | extra | extra | extra | extra |
| Gilling in..... | 1 | extra | extra | extra | extra |
| Dry Combing..... | 1 | extra | extra | extra | — |
| Scotch Wools..... | 3 | 4 $\frac{1}{4}$ | 4 $\frac{1}{4}$ | 5 $\frac{1}{4}$ | 1 $\frac{3}{4}$ |

*On Raw Wool Weight.

†Included in Merinos.

WOOL SELLING PROGRAM IN AUSTRALIA.

THE program adopted by the Australian National Council of Wool Selling Brokers calls for the gradual disposal of that country's wool clip. Of the estimated clip of 1,610,000 bales, it is planned to offer 810,000 bales before Christmas and the balance between January and the middle of May, the 810,000 bales being apportioned as follows:

| | <i>Bales.</i> |
|-------------------|---------------|
| Sydney | 334,000 |
| Brisbane | 120,000 |
| Victoria | 209,000 |
| South Australia | 100,000 |
| Western Australia | 47,000 |

Provision was made for disposing of 108,000 bales in September and 253,000 bales in October. The allocations for the last four months of the calendar year are:

| | <i>Sept. Bales.</i> | <i>Oct. Bales.</i> | <i>Nov. Bales.</i> | <i>Dec. Bales.</i> | <i>Total Bales.</i> |
|-----------------|-------------------------|------------------------|------------------------|------------------------|-------------------------|
| Sydney | 33,300 | 118,000 | 124,700 | 58,000 | 334,000 |
| Brisbane | 40,000 | 40,000 | ..... | 40,000 | 120,000 |
| Victoria | 10,000 | 60,000 | 79,000 | 60,000 | 209,000 |
| South Australia | 25,000 | 25,000 | 25,000 | 25,000 | 100,000 |
| West Australia | ..... | 10,000 | 20,000 | 17,000 | 47,000 |

The offerings by months for the first half of the season compared with those of the same period last year are:

| | 1922-23. | 1923-24. |
|-----------|----------|----------|
| September | 108,200 | 108,300 |
| October | 232,900 | 253,000 |
| November | 259,000 | 248,700 |
| December | 209,800 | 200,000 |

The *Wool Record and Textile World* presents an interesting comparison of the prices obtained for various descriptions of wool at the auctions in recent years with the appraisement values and the pre-war-prices:

| Description. | 1920-23. (3 years auctions) d. | 1917-20. (3 years appraisements) d. | 1913-14. (Pre-war Season) d. |
|-----------------------|---|--|---------------------------------------|
| Greasy merino fleece | 46 $\frac{3}{4}$ | 30 $\frac{3}{4}$ | 16 |
| “ “ broken | 31 $\frac{1}{2}$ | 26 | 13 |
| “ “ necks | 30 $\frac{1}{4}$ | 26 | 13 $\frac{1}{2}$ |
| “ “ lambs | 27 | 23 | 14 $\frac{3}{4}$ |
| “ “ pieces | 29 $\frac{1}{2}$ | 25 $\frac{1}{4}$ | 13 |
| “ “ bellies | 26 $\frac{1}{4}$ | 19 | 11 $\frac{1}{4}$ |
| “ “ locks | 14 $\frac{3}{4}$ | 10 $\frac{3}{4}$ | 8 |
| Crossbred fleece | 34 $\frac{3}{4}$ | 28 | 14 $\frac{3}{4}$ |
| “ “ lambs | 20 | 23 | 13 $\frac{1}{4}$ |
| Comeback fleece | 35 | 29 $\frac{1}{2}$ | 16 |
| Scoured merino fleece | 55 $\frac{1}{2}$ | 48 | 26 $\frac{3}{4}$ |

THE AMERICAN PEACE AWARD.

MR. EDWARD W. BOK has offered a prize of one hundred thousand dollars for the best practicable plan, to be submitted not later than November 15, 1923, by which the United States may co-operate with other nations to achieve and preserve the peace of the world. One-half of the prize is to be paid when the successful plan is selected; payment of the other half being contingent upon its approval in substance and intent by the United States Senate, or when an adequate degree of popular approval for it has been demonstrated. Provision is also made for the award of an additional amount of five thousand dollars, for any part of a plan which may be approved under similar conditions. Full particulars can be obtained upon application to the American Peace Award, 342 Madison Avenue, New York City.

B. A. W. R. A. WOOL STOCKS.

THE following statistical statement shows the stocks of B. A. W. R. A. wools held and afloat as of December 31, 1922, May 31, 1923 and June 30, 1923:

| Description. | Stocks and Afloat Dec. 31, 1922 Bales. | Stocks and Afloat May 31, 1923 Bales. | Stocks and Afloat June 30, 1923 Bales. |
|-----------------------------------|---|--|---|
| | | | |
| AUSTRALIAN: | | | |
| Merino | | | |
| Combing..... | 60,725 | 22,941 | 1,000 |
| Clothing..... | 5,779 | 918 | 100 |
| Carbonizing..... | 7,269 | 1,728 | 50 |
| Totals, Merino..... | 73,773 | 25,587 | 1,150 |
| Crossbred: | | | |
| Combing, fine 50/58/60's..... | 176,605 | 136,000 | 121,000 |
| Combing, med. 44/46's..... | 90,485 | 61,000 | 59,000 |
| Combing, low 40's and below..... | 35,209 | 25,000 | 26,000 |
| Clothing, fine 50/58/60's..... | 39,782 | 30,000 | 27,000 |
| Clothing, med. 44/46's..... | 19,995 | 15,000 | 14,000 |
| Clothing, low 40's and below..... | 10,418 | 8,000 | 8,000 |
| Carbong., fine 50/58/60's..... | 62,747 | 48,000 | 41,000 |
| Carbong., med. 44/46's..... | 34,570 | 26,000 | 27,000 |
| Carbong., low 40's and below..... | 11,664 | 9,000 | 10,000 |
| Totals, Crossbred..... | 481,475 | 358,000 | 333,000 |
| Grand Totals, Australian..... | 555,248 | 383,587 | 334,150 |
| NEW ZEALAND: | | | |
| Merino..... | 2,465 | 1,000 | 700 |
| Crossbred (bulk combing) | | | |
| Fine, 56/58's..... | 9,687 | 6,000 | 5,000 |
| Med. 46/48/50's..... | 85,410 | 56,000 | 49,000 |
| Low 44's and below..... | 120,849 | 73,000 | 66,000 |
| Slipes..... | 72,560 | 42,000 | 37,000 |
| Scoured..... | 67,041 | 39,000 | 31,000 |
| Totals, New Zealand..... | 358,012 | 217,000 | 188,700 |
| Grand Totals..... | 913,260 | 600,587 | 522,850 |

Note—Of the stocks of wool shown above, one-half of the Australian wool and the whole of the New Zealand wool belongs to the British Government. The other half of the Australian wool belongs to the British Australian Wool Realization Association, Ltd.

Statistics for Third Quarter.

ACTIVE AND IDLE MACHINERY AS OF JULY 1,¹
AUGUST 1,² AND SEPTEMBER 1,³ 1923.

AS REPORTED BY THE BUREAU OF THE CENSUS, UNITED
STATES DEPARTMENT OF COMMERCE.

THE reports issued by the Bureau of the Census of the active and idle machinery in the wool manufacture as of July 1, August 1, and September 1, 1923 are herewith presented. Reports of active and idle machinery were begun by the National Association of Wool Manufacturers in December, 1913, and since that date they form a continuous record of the state of the industry. In November, 1918, the Bureau of Markets asked to take over the work, and later it was turned over to the Bureau of the Census, its first report being as of July 1, 1919.

The figures for the quarter show an almost steadily diminishing amount of active machinery and a constantly growing number of idle machines in all branches of the industry for which reports are received. The July report covers 60,592 wide looms of which 51,079 were active and 9,513 were idle. While the report as of September 1 covers 62,010 broad looms, only 47,714 were in operation, or 3365 fewer than shown in the report of two months earlier. The September report shows 370 fewer narrow looms, 273 fewer carpet looms, 97 fewer cards, 96 fewer combs, 63,124 fewer woolen spinning spindles and 55,744 fewer worsted spinning spindles in operation than were shown by the report as of July 1. This decreased activity of machinery corresponds with the decreased consumption of wool reported for August. The per cent of active machines to the total reported as of July 1 and September 1 dropped at the latter date 7.4 per cent for the broad looms, 2.9 per cent for the narrow looms, 2.3 per cent for carpet and rug looms, 1.6 per cent for cards, 6.4 per cent for combs, 3.0 per cent for woolen spinning spindles and 5.5 per cent for worsted spinning spindles. The loss in active machinery was greatest between the reports as of August 1 and September 1.

An examination of the figures showing the per cent of active and idle hours to the total reported, maximum single shift capacity, shows that the

(1) These figures do not include data for the Amoskeag Mfg. Co., Manchester, N. H.; John and James Dobson, Inc., Philadelphia, Pa.; Faulkner & Colony Manufacturing Co., Keene, N. H.; Merrill Woolen Mills, Merrill, Wis.; or Sheble & Kemp, Philadelphia, Pa.

(2) These figures do not include data for John and James Dobson, Inc., Philadelphia, Pa.; Faulkner & Colony Mfg. Co., Keene, N. H.; Merrill Woolen Mills, Merrill, Wis.; or Sheble & Kemp, Philadelphia, Pa.

(3) These figures do not include returns from the Daniel Boone Woolen Mills, Chicago, Ill.; John and James Dobson, Inc., Philadelphia, Pa.; Faulkner & Colony Manufacturing Co., Keene, N. H.; Merrill Woolen Mills, Merrill, Wisconsin; or Sheble & Kemp, Philadelphia, Pa.

overtime noted in reports for the earlier months of the year has disappeared. Instead, the percentage of active machinery in all branches of the industry has markedly decreased and the percentage of idle machinery has correspondingly increased between the reports as of July 1, and September 1. The decreases were: broad looms 13.8 per cent, narrow looms 19.2 per cent, carpet and rug looms 5.1 per cent, cards 12.2 per cent, combs 18.2 per cent, woolen spinning spindles 3.8 per cent and worsted spinning spindles 13.6 per cent.

July 1, 1923.

Summary of Reports of 952 Manufacturers, Operating 1,133 Mills.

| | Looms | | | Sets of Cards | Combs | Spinning Spindles | |
|------------------|-------------------------------------|----------------------------------|----------------------|---------------------|-------|-------------------|-----------|
| | Wider than 50 inch reed space | 50 inch reed space or less | Carpet and Rug | | | Woolen | Worsted |
| In operation.... | 51,079 | 14,390 | 7,979 | 6,204 | 2,125 | 1,994,909 | 2,227,531 |
| Idle..... | 9,513 | 2,786 | 1,142 | 787 | 119 | 294,934 | 246,855 |
| Total..... | 60,592 | 17,176 | 9,121 | 6,991 | 2,544 | 2,289,843 | 2,474,386 |

NOTE—All figures dated the first of the month cover the preceding month.

August 1, 1923.

Summary of Reports of 950 Manufacturers, Operating 1,131 Mills.

| | Looms | | | Sets of Cards | Combs | Spinning Spindles | |
|------------------|-------------------------------------|----------------------------------|----------------------|---------------------|-------|-------------------|-----------|
| | Wider than 50 inch reed space | 50 inch reed space or less | Carpet and Rug | | | Woolen | Worsted |
| In operation.... | 47,958 | 13,959 | 7,173 | 6,162 | 2,081 | 1,969,211 | 2,194,826 |
| Idle..... | 10,660 | 2,880 | 1,215 | 774 | 468 | 312,120 | 229,377 |
| Total..... | 58,618 | 16,839 | 8,388 | 6,936 | 2,549 | 2,281,331 | 2,424,203 |

September 1, 1923.

Summary of Reports of 951 Manufacturers, Operating 1,123 Mills.

| | Looms | | | Sets of Cards | Combs | Spinning Spindles | |
|--------------------|-------------------------------------|----------------------------------|----------------------|---------------------|-------|-------------------|-----------|
| | Wider than 50 inch reed space | 50 inch reed space or less | Carpet and Rug | | | Woolen | Worsted |
| In operation . . . | 47,714 | 14,020 | 7,706 | 6,107 | 2,029 | 1,931,785 | 2,171,787 |
| Idle | 14,296 | 3,320 | 1,337 | 901 | 604 | 365,277 | 398,500 |
| Total | 62,010 | 17,340 | 9,043 | 7,008 | 2,633 | 2,297,062 | 2,570,287 |

PERCENTAGES ARE BASED ON SINGLE SHIFT TIME.

Number of Machines in Operation Per Shift.

| | | | | | | | |
|------------------------|--------|--------|-------|-------|-------|-----------|-----------|
| September 1, 1923: | | | | | | | |
| Single shift | 44,632 | 13,860 | 7,486 | 5,327 | 1,558 | 1,717,791 | 1,971,632 |
| Double shift | 3,082 | 160 | 220 | 780 | 471 | 213,994 | 200,155 |
| August 1, 1923: | | | | | | | |
| Single shift | 44,837 | 13,805 | 6,960 | 5,285 | 1,453 | 1,734,564 | 2,040,856 |
| Double shift | 3,121 | 154 | 213 | 877 | 628 | 234,647 | 153,970 |
| July 1, 1923: | | | | | | | |
| Single shift | 47,804 | 14,256 | 7,746 | 5,307 | 1,494 | 1,750,943 | 2,025,017 |
| Double shift | 3,275 | 134 | 233 | 897 | 631 | 243,966 | 202,514 |
| June 1, 1923: | | | | | | | |
| Single shift | 48,492 | 14,445 | 7,699 | 5,403 | 1,517 | 1,786,714 | 2,088,563 |
| Double shift | 3,915 | 146 | 248 | 964 | 726 | 258,688 | 232,093 |
| May 1, 1923: | | | | | | | |
| Single shift | 48,548 | 14,376 | 7,516 | 5,279 | 1,539 | 1,764,086 | 2,082,042 |
| Double shift | 3,960 | 160 | 269 | 1,002 | 738 | 277,579 | 249,851 |
| April 1, 1923: | | | | | | | |
| Single shift | 48,101 | 14,565 | 7,645 | 5,274 | 1,559 | 1,773,532 | 2,051,782 |
| Double shift | 4,197 | 166 | 237 | 1,028 | 756 | 283,995 | 247,175 |
| Mar. 1, 1923: | | | | | | | |
| Single shift | 47,362 | 14,630 | 7,703 | 5,291 | 1,549 | 1,767,698 | 2,028,915 |
| Double shift | 3,950 | 166 | 236 | 905 | 690 | 238,662 | 230,501 |
| Feb. 1, 1923: | | | | | | | |
| Single shift | 47,576 | 14,656 | 7,677 | 5,194 | 1,575 | 1,717,557 | 2,056,204 |
| Double shift | 3,792 | 134 | 251 | 844 | 635 | 228,086 | 228,304 |
| Jan. 1, 1923: | | | | | | | |
| Single shift | 48,136 | 14,402 | 7,624 | 5,226 | 1,532 | 1,720,356 | 2,042,694 |
| Double shift | 3,486 | 96 | 215 | 768 | 658 | 235,390 | 215,121 |

Per Cent of Active and Idle Machines to Total Reported.

| | | | | | | | |
|--------------------|------|------|------|------|------|------|------|
| September 1, 1923: | | | | | | | |
| Active..... | 76.9 | 80.9 | 85.2 | 87.1 | 77.1 | 84.1 | 84.5 |
| Idle..... | 23.1 | 19.1 | 14.8 | 12.9 | 22.9 | 15.9 | 15.5 |
| August 1, 1923: | | | | | | | |
| Active..... | 81.8 | 82.9 | 85.5 | 88.8 | 81.6 | 86.3 | 90.5 |
| Idle..... | 18.2 | 17.1 | 14.5 | 11.2 | 18.4 | 13.7 | 9.5 |
| July 1, 1923: | | | | | | | |
| Active..... | 84.3 | 83.8 | 87.5 | 88.7 | 83.5 | 87.1 | 90.0 |
| Idle..... | 15.7 | 16.2 | 12.5 | 11.3 | 16.5 | 12.9 | 10.0 |
| June 1, 1923: | | | | | | | |
| Active..... | 86.5 | 85.3 | 87.2 | 91.2 | 88.1 | 89.6 | 94.1 |
| Idle..... | 13.5 | 14.7 | 12.8 | 8.8 | 11.9 | 10.4 | 5.9 |
| May 1, 1923: | | | | | | | |
| Active..... | 86.7 | 85.2 | 86.1 | 90.5 | 89.9 | 90.0 | 94.3 |
| Idle..... | 13.3 | 14.8 | 13.9 | 9.5 | 10.1 | 10.0 | 5.7 |
| April 1, 1923: | | | | | | | |
| Active..... | 86.3 | 86.1 | 86.6 | 90.7 | 91.4 | 90.0 | 93.7 |
| Idle..... | 13.7 | 13.9 | 13.4 | 9.3 | 8.6 | 10.0 | 6.3 |
| March 1, 1923: | | | | | | | |
| Active..... | 83.4 | 85.7 | 85.0 | 88.4 | 87.4 | 87.0 | 91.3 |
| Idle..... | 16.6 | 14.3 | 15.0 | 11.6 | 12.6 | 13.0 | 8.7 |
| Feb. 1, 1923: | | | | | | | |
| Active..... | 80.9 | 85.7 | 86.0 | 85.8 | 83.8 | 84.5 | 89.5 |
| Idle..... | 19.1 | 14.3 | 14.0 | 14.2 | 16.2 | 15.5 | 10.5 |
| Jan. 1, 1923: | | | | | | | |
| Active..... | 81.1 | 82.7 | 84.9 | 85.2 | 83.1 | 84.5 | 89.2 |
| Idle..... | 18.9 | 17.3 | 15.1 | 14.8 | 16.9 | 15.5 | 10.8 |

Active and Idle Machine and Spindle Hours.

| | Looms. | | | Sets of Cards. | Combs. | Spinning Spindles. | |
|-----------------|---|-----------------------------------|-----------------------|----------------------|---------|--------------------|-------------|
| | Wider than 50 inch reed space. | 50 inch reed space or less. | Carpet and rug. | | | Woolen. | Worsted. |
| Sept. 1, 1923: | | | | | | | |
| Active..... | 10,627,606 | 2,497,452 | 1,640,007 | 1,501,633 | 502,566 | 493,908,572 | 471,803,716 |
| Idle..... | 3,308,556 | 1,414,926 | 412,909 | 109,985 | 92,565 | 61,149,266 | 107,142,214 |
| August 1, 1923: | | | | | | | |
| Active..... | 9,852,405 | 2,610,247 | 1,327,315 | 1,385,337 | 507,213 | 435,244,857 | 441,812,104 |
| Idle..... | 2,356,244 | 924,765 | 462,748 | 85,629 | 14,379 | 46,938,488 | 50,927,914 |
| July 1, 1923: | | | | | | | |
| Active..... | 11,615,432 | 3,070,628 | 1,667,717 | 1,630,103 | 567,782 | 471,475,377 | 509,320,518 |
| Idle..... | 1,280,621 | 630,079 | 295,137 | 13 | 14 | 36,502,850 | 25,985,986 |
| June 1, 1923: | | | | | | | |
| Active..... | 11,819,798 | 3,142,085 | 1,742,059 | 1,567,112 | 611,216 | 502,084,168 | 541,713,250 |
| Idle..... | 1,127,799 | 580,763 | 291,104 | 10 | 11 | 304,960 | 12 |
| May 1, 1923: | | | | | | | |
| Active..... | 11,052,061 | 2,984,045 | 1,588,398 | 1,871,103 | 621,265 | 488,547,742 | 577,196,105 |
| Idle..... | 1,299,647 | 580,405 | 337,292 | 6 | 7 | 5 | 9 |
| April 1, 1923: | | | | | | | |
| Active..... | 12,635,841 | 3,251,061 | 1,770,161 | 1,655,917 | 672,515 | 516,995,043 | 564,389,657 |
| Idle..... | 959,658 | 541,517 | 262,342 | 3 | 4 | 7,587,718 | 5 |
| Mar. 1, 1923: | | | | | | | |
| Active..... | 9,711,297 | 2,568,005 | 1,540,787 | 1,387,527 | 472,818 | 445,675,961 | 467,490,099 |
| Idle..... | 2,469,988 | 886,723 | 341,273 | 72,832 | 33,932 | 25,204,849 | 20,720,783 |
| Feb. 1, 1923: | | | | | | | |
| Active..... | 11,865,287 | 3,233,402 | 1,795,526 | 1,491,727 | 588,472 | 463,898,355 | 528,877,935 |
| Idle..... | 1,814,868 | 627,533 | 284,036 | 76,965 | 2 | 42,409,524 | 25,576,771 |
| Jan. 1, 1923: | | | | | | | |
| Active..... | 10,923,787 | 2,682,877 | 1,646,660 | 1,396,753 | 556,182 | 437,675,474 | 495,271,607 |
| Idle..... | 2,001,771 | 978,549 | 329,855 | 83,254 | 1 | 45,746,943 | 7,215,583 |

Per Cent of Active and Idle Hours to Total Reported (Maximum Single Shift Capacity).

| | | | | | | | |
|--------------------|------|------|------|-------|------------------|-------|-------|
| September 1, 1923: | | | | | | | |
| Active..... | 76.3 | 63.8 | 79.9 | 93.2 | 84.4 | 89.0 | 81.5 |
| Idle..... | 23.7 | 36.2 | 20.1 | 6.8 | 15.6 | 11.0 | 18.5 |
| August 1, 1923: | | | | | | | |
| Active..... | 80.7 | 73.8 | 74.1 | 94.2 | 97.2 | 90.3 | 89.7 |
| Idle..... | 19.3 | 26.2 | 25.9 | 5.8 | 2.8 | 9.7 | 10.3 |
| July 1, 1923: | | | | | | | |
| Active..... | 90.1 | 83.0 | 85.0 | 105.4 | 102.6 | 92.8 | 95.1 |
| Idle..... | 9.9 | 17.0 | 15.0 | 13 | 14 | 7.2 | 4.9 |
| June 1, 1923: | | | | | | | |
| Active..... | 91.3 | 84.4 | 85.7 | 101.4 | 112.6 | 99.9 | 103.6 |
| Idle..... | 8.7 | 15.6 | 14.3 | 10 | 11 | 0.1 | 12 |
| May 1, 1923: | | | | | | | |
| Active..... | 89.5 | 83.7 | 82.5 | 127.3 | 119.8 | 102.0 | 109. |
| Idle..... | 10.5 | 16.3 | 17.5 | 6 | 7 | 8 | 9 |
| April 1, 1923: | | | | | | | |
| Active..... | 92.9 | 85.7 | 87.1 | 103.9 | 117.2 | 98.6 | 102.1 |
| Idle..... | 7.1 | 14.3 | 12.9 | 3 | 4 | 1.4 | 5 |
| Mar. 1, 1923: | | | | | | | |
| Active..... | 79.7 | 74.3 | 81.9 | 95.0 | 93.3 | 94.6 | 95.8 |
| Idle..... | 20.3 | 25.7 | 18.1 | 5.0 | 6.7 | 5.4 | 4.2 |
| Feb. 1, 1923: | | | | | | | |
| Active..... | 86.7 | 83.7 | 86.3 | 95.1 | 103.0 | 91.6 | 95.4 |
| Idle..... | 13.3 | 16.3 | 13.7 | 4.9 | ... ² | 8.4 | 4.6 |
| Jan. 1, 1923: | | | | | | | |
| Active..... | 84.5 | 73.3 | 83.3 | 94.4 | 103.8 | 90.5 | 98.6 |
| Idle..... | 15.5 | 26.7 | 16.7 | 5.6 | ... ¹ | 9.5 | 1.4 |

- 1 Overtime reported was sufficient to offset all idle hours and leave an excess of 20,427 hours, or 3.8 per cent.
- 2 Overtime reported was sufficient to offset all idle hours and leave an excess of 16,994 hours, or 3.0 per cent.
- 3 Overtime reported was sufficient to offset all idle hours and leave an excess of 62,490 hours, or 3.9 per cent.
- 4 Overtime reported was sufficient to offset all idle hours and leave an excess of 98,726 hours, or 7.2 per cent.
- 5 Overtime reported was sufficient to offset all idle hours and leave an excess of 11,720,315 hours, or 2.1 per cent.
- 6 Overtime reported was sufficient to offset all idle hours and leave an excess of 401,418 hours, or 27.3 per cent.
- 7 Overtime reported was sufficient to offset all idle hours and leave an excess of 102,492 hours, or 19.8 per cent.
- 8 Overtime reported was sufficient to offset all idle hours and leave an excess of 9,696,295 hours, or 2.0 per cent.
- 9 Overtime reported was sufficient to offset all idle hours and leave an excess of 50,045,287 hours, or 9.5 per cent.
- 10 Overtime reported was sufficient to offset all idle hours and leave an excess of 21,998 hours, or 1.4 per cent.
- 11 Overtime reported was sufficient to offset all idle hours and leave an excess of 68,448 hours, or 12.6 per cent.
- 12 Overtime reported was sufficient to offset all idle hours and leave an excess of 18,588,721 hours, or 3.6 per cent.
- 13 Overtime reported was sufficient to offset all idle hours and leave an excess of 83,878 hours, or 5.4 per cent.
- 14 Overtime reported was sufficient to offset all idle hours and leave an excess of 14,472 hours or 2.6 per cent.

WOOL STOCKS AND CONSUMPTION.

BELOW we print our quarterly report (compiled from figures collected by the Bureau of the Census and the Bureau of Agricultural Economics) showing the quantity of wool reported to be in the hands of domestic wool dealers and manufacturers as of June 30, 1923. They show that stocks of grease, scoured and pulled wools on that date were 43,806,745 pounds greater than on the same date in 1922. Dealers held 755,590 more pounds of domestic wool and 29,451,245 more pounds of foreign wools, while manufacturers held 22,613,968 fewer pounds of domestic wools and 18,238,710 more of foreign wools. Of scoured wools, dealers had 7,628,151 more pounds on June 30, 1923 than on the same day the year previous, while manufacturers held 3,736,736 fewer pounds. Of pulled wools, dealers held 7,628,151, and manufacturers, 1,506,202 more pounds than they did on the same date in 1922. Dealers had 2,498,515 more pounds of tops, while manufacturers had 4,140,958 fewer pounds, and of noils, dealers had 4,357,946 and manufacturers 1,654,772 more pounds than on the same date in 1922.

On June 30, 1923, manufacturers' stocks of grease wool were 4,375,258 pounds, of scoured wool, 3,736,736 pounds and of tops, 4,140,958 pounds lighter than on the same day a year earlier, while their stocks of pulled wool were 1,506,202 pounds and of noils 1,654,772 pounds heavier than on the same date in 1922.

Between March 31 and June 30, 1923 the stocks of grease wool were increased by 46,584,254 pounds. Scoured wool decreased 13,961,844 pounds and pulled wool, 1,545,224 pounds, while tops were but 151,184 pounds and noils, 568,538 pounds less than on the same date three months earlier. Dealers held 60,571,479 more pounds of grease wool, while manufacturers had 14,087,225 fewer pounds than on March 31, 1923. Dealers had 3,658,556 more pounds of scoured wool, but the supplies of manufacturers were 3,322,366 pounds less. Of pulled wool, dealers' supplies were 376,571 pounds and manufacturers', 782,347 pounds less. Dealers held 1,747,544

more pounds of tops, while the supplies of manufacturers were 1,823,136 pounds less. There was a decrease of noils of 401,491 pounds in dealers' stocks and of 117,222 in manufacturers' supplies. The total quantity of wool, grease equivalent, in the hands of both dealers and manufacturers was 30,357,464 pounds greater on June 30 than on March 31, 1923.

Because reports of stocks are not made by nine dealers and twelve manufacturers, some of each class being of very considerable importance, the figures printed are considerably smaller than the stocks actually in the hands of men holding them for sale and of concerns holding them for manufacture.

WOOL STOCKS JUNE 30, 1923 AS REPORTED BY DEALERS
AND MANUFACTURERS.¹

(All quantities in pounds.)

| As reported by 419 Dealers and 620 Manufacturers. | Held by | | Total. | Estimated Equivalent Grease Wool. |
|---|----------------|---------------------|----------------|--|
| | Dealers. | Manufac- turers. | | |
| | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i> |
| Grease Wool: | | | | |
| Domestic | 87,664,819 | 32,361,234 | 120,026,053 | |
| Foreign | 99,064,777 | 129,073,468 | 228,138,245 | |
| Total | 186,729,596 | 161,434,702 | 348,164,298 | 348,164,298 |
| Scoured Wool: | | | | |
| Domestic | 5,318,630 | 9,548,712 | 14,867,342 | |
| Foreign | 15,756,615 | 8,915,490 | 24,672,105 | |
| Total | 21,075,245 | 18,464,202 | 39,539,447 | 79,078,894 |
| Pulled Wool: | | | | |
| Domestic | 7,061,233 | 5,969,824 | 13,031,057 | |
| Foreign | 6,064,913 | 5,178,114 | 11,243,027 | |
| Total | 13,126,146 | 11,147,938 | 24,274,084 | 32,365,445 |
| Total grease, scoured and pulled: | | | | 459,608,637 |
| Tops | 5,125,204 | 16,578,716 | 21,703,920 | 43,407,840 |
| Noils | 5,976,756 | 8,364,245 | 14,341,001 | 28,682,002 |
| Grease equivalent of all wool re- ported above | | | | 531,698,479 |

(1) The manufacturing establishments which did not make returns were: The American Woolen Company, Boston, Mass.; Amos Abbott Company, Dexter, Maine; Carolina Cotton & Woolen Mills Co., Spray, N. C.; Columbia Woolen Mills, Columbia City, Indiana; Crown Mills, Marcellus, N. Y.; Davisville Woolen Company, Davisville, R. I.; W. J. Dickey & Sons, Inc., Oella, Md.; John and James Dobson, Inc., Philadelphia, Pa.; Faulkner & Colony Mfg. Company, Keene, N. H.; Hillsborough Mills, Wilton, N. H.; Merrimack Woolen Corporation, Lowell, Mass.; or Sheble & Kemp, Philadelphia, Pa.

STOCKS OF WOOL, TOPS, AND NOILS HELD BY DEALERS ON
JUNE 30, 1923, BY CITIES.

(All quantities in pounds.)

| City. | Total. | Grease. | Scoured. | Pulled. | Tops. | Noils. |
|-------------------|-------------|-------------|------------|------------|-----------|-----------|
| Total..... | 232,032,947 | 186,729,596 | 21,075,245 | 13,126,146 | 5,125,204 | 5,976,756 |
| Boston..... | 147,555,952 | 119,025,484 | 15,413,561 | 6,038,348 | 4,271,191 | 2,897,368 |
| Philadelphia.... | 31,537,599 | 23,342,574 | 3,684,282 | 2,048,226 | 179,485 | 2,283,032 |
| St. Louis..... | 10,384,016 | 10,289,772 | 94,244 | | | |
| Chicago..... | 10,199,685 | 6,845,729 | 892,469 | 2,461,496 | | |
| New York..... | 7,911,359 | 7,044,458 | 243,063 | 223,838 | 400,000 | |
| Portland, Ore.... | 3,189,771 | 3,176,771 | 13,000 | | | |
| San Francisco.... | 850,243 | 596,861 | 22,588 | 230,794 | | |
| Other Cities..... | 20,404,322 | 16,407,947 | 712,047 | 2,123,444 | 274,528 | 886,356 |

STOCKS OF WOOL, TOPS, AND NOILS HELD BY MANUFACTURERS
ON JUNE 30, 1923, BY SECTIONS.

(All quantities in pounds.)

| Section. | Total. | Grease. | Scoured. | Pulled. | Tops. | Noils. |
|-------------------|-------------|-------------|------------|------------|------------|-----------|
| Total..... | 215,989,803 | 161,434,702 | 18,464,202 | 11,147,938 | 16,578,716 | 8,364,245 |
| New England.... | 88,350,191 | 64,734,907 | 9,297,573 | 4,175,436 | 6,452,550 | 3,689,725 |
| Middle Atlantic.. | 104,835,545 | 82,662,963 | 5,182,494 | 5,245,819 | 8,076,509 | 3,667,760 |
| Pacific Coast.... | 3,293,454 | 2,460,557 | 640,689 | 112,317 | 1,712 | 78,179 |
| All other..... | 19,510,613 | 11,576,275 | 3,343,446 | 1,614,366 | 2,047,945 | 928,581 |

FOREIGN WOOL AFLOAT TO THE UNITED STATES ON JUNE 30, 1923,
BY GRADE.

(All quantities in pounds.)

| Grade. | Total. | Grease. | Scoured. | Pulled. |
|--------------------------|-----------|-----------|----------|---------|
| Total..... | 8,353,215 | 7,649,848 | 508,543 | 194,824 |
| Fine..... | 1,467,575 | 1,441,394 | 26,181 | |
| $\frac{1}{2}$ blood..... | 609,127 | 494,327 | 114,800 | |
| $\frac{3}{4}$ blood..... | 1,048,629 | 923,559 | 125,070 | |
| $\frac{1}{4}$ blood..... | 745,370 | 710,601 | 28,486 | 6,283 |
| Lincoln..... | 445,000 | 445,000 | | |
| Carpet..... | 3,849,085 | 3,446,538 | 214,096 | 188,541 |
| Grade not stated.. | 188,429 | 188,429 | | |

WOOL CONSUMED BY MONTHS.

BELOW will be found the reports of the quantity of wool consumed during the months of June, July and August. The number of firms and corporations making reports of consumption is smaller even than for the preceding two months. For June, schedules were returned by 597 manufacturers and for July and August 595 made returns.

The consumption, grease equivalent, for June was a trifle more—27,610 pounds—than in the corresponding month in 1922, while that for July was 554,815 pounds less than for July a year ago. Consumption in August indicates the state of the industry, it being 9,107,039 pounds, grease equivalent, less than that of August, 1922. The consumption for the three months in 1922 was 156,863,050 pounds and in the same months in 1923 was 147,228,806 or 9,634,244 pounds less than in the corresponding months a year ago.

Notwithstanding this loss in recent months, the consumption, grease equivalent, for the eight months ended with August, was 29,052,325 pounds larger than the record consumption of 1922, the figures being 418,393,463 pounds for the eight months of 1922 and 447,445,788 pounds for the same period in 1923.

WOOL CONSUMED BY MONTHS.

JUNE, 1923.

Schedules returned by 597 manufacturers.¹

| | | Grease Equivalent. |
|----------------|-------------------|--------------------|
| In grease..... | 34,864,437 pounds | 34,864,437 pounds |
| Scoured..... | 7,004,574 “ | 14,009,148 “ |
| Pulled..... | 2,831,257 “ | 3,775,010 “ |
| Total..... | 44,700,268 “ | 52,648,595 “ |

(1) These figures do not include data for the American Woolen Company, Boston, Mass.; Amos Abbott Company, Dexter, Maine; Carolina Cotton & Woolen Mills Company, Spray, N. C.; Columbia Woolen Mills, Columbia City, Ind.; Crown Mills, Marcellus, N. Y.; Davisville Woolen Company, Davisville, R. I.; W. J. Dickey & Sons, Inc., Oella, Md.; Faulkner & Colony Mfg. Company, Keene, N. H.; Hillsborough Mills, Wilton, N. H.; Merrimack Woolen Corp., Lowell, Mass.; or Sheble & Kemp, Philadelphia, Pa.

544 NATIONAL ASSOCIATION OF WOOL MANUFACTURERS.

JULY, 1923.

Schedules returned by 595 manufacturers.²

| | | Grease Equivalent. |
|----------------|-------------------|--------------------|
| In grease..... | 31,165,031 pounds | 31,165,031 pounds |
| Scoured..... | 6,018,202 " | 12,036,404 " |
| Pulled..... | 2,359,366 " | 3,145,821 " |
| Total..... | 39,542,599 " | 46,347,256 " |

AUGUST, 1923.

Schedules returned by 595 manufacturers.³

| | | Grease Equivalent. |
|----------------|-------------------|--------------------|
| In grease..... | 33,221,606 pounds | 33,221,606 pounds |
| Scoured..... | 5,883,697 " | 11,767,394 " |
| Pulled..... | 2,432,966 " | 3,243,955 " |
| Total..... | 41,538,269 " | 48,232,955 " |

(2) These figures do not include data for the American Woolen Company, Boston, Mass.; Amos Abbott Company, Dexter, Maine; Carolina Cotton & Woolen Mills Company, Spray, N. C.; Columbia Woolen Mills, Columbia City, Ind.; Crown Mills, Marcellus, N. Y.; Daniel Boone Woolen Mills, Chicago, Ill.; Davisville Woolen Company, Davisville, R. I.; W. J. Dickey & Sons, Inc., Oella, Md.; John & James Dobson, Inc., Philadelphia, Pa.; Faulkner & Colony Mfg. Co., Keene, N. H.; Hillsborough Mills, Wilton, N. H.; Merrill Woolen Mills Company, Merrill, Wisconsin; Merrimack Woolen Corp., Lowell, Mass.; or Sheble and Kemp, Philadelphia, Pa.

(3) The reports received do not include data from the American Woolen Company, Boston, Mass.; Amos Abbott Company, Dexter, Maine; Carolina Cotton and Woolen Mills Company, Spray, N. C.; Columbia Woolen Mills, Columbia City, Ind.; Crown Mills, Marcellus, N. Y.; Daniel Boone Woolen Mills, Chicago, Ill.; Davisville Woolen Company, Davisville, R. I.; W. J. Dickey & Sons, Inc., Oella, Md.; John and James Dobson, Inc., Philadelphia, Pa.; Faulkner and Colony Mfg. Company, Keene, N. H.; Hillsborough Mills, Wilton, N. H.; Merrill Woolen Mills Company, Merrill, Wisconsin; Merrimack Woolen Corporation, Lowell, Mass.; or Sheble and Kemp, Philadelphia, Pa.

MONTHLY CONSUMPTION—GREASE EQUIVALENTS.

| Month. | 1922 | | 1923 | |
|---------------|------------------------|--|------------------------|--|
| | Consumption for Month. | Totals for Year to End of Month Indicated. | Consumption for Month. | Totals for Year to End of Month Indicated. |
| January..... | 52,280,000 | 52,280,000 | 63,348,352 | 63,348,352 |
| February..... | 53,774,000 | 106,054,000 | 57,916,339 | 121,264,691 |
| March..... | 60,368,000 | 166,422,000 | 62,859,150 | 184,123,841 |
| April..... | 42,574,000 | 208,996,000 | 56,410,887 | 240,534,728 |
| May..... | 52,533,091 | 261,529,091 | 59,682,254 | 300,216,982 |
| June..... | 52,620,985 | 314,151,398 | 52,648,595 | 352,865,577 |
| July..... | 46,902,071 | 361,053,469 | 46,347,256 | 399,212,833 |
| August..... | 57,339,994 | 418,393,463 | 48,232,955 | 447,445,788 |

In computing the grease equivalent one pound of scoured wool is considered equivalent to two pounds in the grease, and one pound of pulled wool equivalent to one and one-third pounds in the grease.

CONSUMPTION OF WOOL BY GEOGRAPHIC SECTIONS.^a*(All quantities in pounds).***June, 1923.**

| Section. | Total. | Grease. | Scoured. | Pulled. | Grease Equiv- alent.† |
|----------------------|------------|------------|-----------|-----------|-----------------------------|
| Total..... | 44,700,268 | 34,864,437 | 7,004,574 | 2,831,257 | 52,648,595 |
| New England..... | 22,738,695 | 17,652,170 | 3,849,541 | 1,236,984 | 27,000,564 |
| Middle Atlantic..... | 17,893,503 | 15,100,138 | 1,536,062 | 1,257,303 | 19,848,668 |
| Pacific Coast..... | 547,013 | 191,037 | 320,504 | 35,472 | 879,341 |
| Other Sections..... | 3,521,057 | 1,921,092 | 1,298,467 | 301,498 | 4,920,022 |

July, 1923.

| Section. | Total. | Grease. | Scoured. | Pulled. | Grease Equiv- alent.† |
|----------------------|------------|------------|-----------|-----------|-----------------------------|
| Total..... | 39,542,599 | 31,165,031 | 6,018,202 | 2,359,366 | 46,347,256 |
| New England..... | 20,201,535 | 15,779,000 | 3,242,202 | 1,180,333 | 23,837,181 |
| Middle Atlantic..... | 15,702,255 | 13,414,903 | 1,377,324 | 910,028 | 17,382,922 |
| Pacific Coast..... | 535,060 | 201,617 | 297,664 | 35,779 | 844,650 |
| Other sections..... | 3,103,749 | 1,769,511 | 1,101,012 | 233,226 | 4,282,503 |

August, 1923.

| Section. | Total. | Grease. | Scoured. | Pulled. | Grease Equiv- alent.† |
|----------------------|------------|------------|-----------|-----------|-----------------------------|
| Total..... | 41,538,269 | 33,221,606 | 5,883,697 | 2,432,966 | 48,232,955 |
| New England..... | 19,834,167 | 15,681,506 | 3,122,192 | 1,030,469 | 23,299,849 |
| Middle Atlantic..... | 17,720,743 | 15,215,434 | 1,405,933 | 1,099,376 | 19,493,135 |
| Pacific Coast..... | 487,727 | 187,643 | 263,484 | 36,600 | 763,411 |
| Other Sections..... | 3,495,632 | 2,137,023 | 1,092,088 | 266,521 | 4,676,560 |

(a) Because many large mills located chiefly in New England do not make reports of wool consumed, this table gives an erroneous impression of consumption in that section.

† In computing the grease equivalent, 1 pound of scoured wool is considered equivalent to two pounds in the grease; and one pound of pulled, to one and one-third pounds in the grease.

QUARTERLY REPORT OF THE BOSTON WOOL MARKET FOR
JULY, AUGUST, SEPTEMBER, 1923, AND SEPTEMBER, 1922.

DOMESTIC WOOLS. (F. NATHANIEL PERKINS.)

| | 1923. | | | 1922. |
|---|---------------|---------------|---------------|---------------|
| | July | August | September | September |
| OHIO, PENNSYLVANIA, AND WEST VIRGINIA. (UNWASHED.) | | | | |
| | <i>Cents.</i> | <i>Cents.</i> | <i>Cents.</i> | <i>Cents.</i> |
| Fine..... | 53 | 50 | 48 | 48 |
| $\frac{1}{2}$ Blood..... | 58 | 55 | 54 | 51 |
| $\frac{3}{8}$ "..... | 57 | 55 | 53 | 47 |
| $\frac{1}{4}$ "..... | 53 | 50 | 48 | 44 |
| Fine Delaine..... | 58 | 56 | 53 | 55 |
| MICHIGAN, WISCONSIN, NEW YORK, ETC. (UNWASHED.) | | | | |
| Fine..... | 48 @ 50 | 47 @ 48 | 46 @ 48 | 43 |
| $\frac{1}{2}$ Blood..... | 55 @ 56 | 54 @ 5 | 52 @ 54 | 49 |
| $\frac{3}{8}$ "..... | 55 | 53 @ 55 | 52 @ 53 | 45 |
| $\frac{1}{4}$ "..... | 50 @ 52 | 48 @ 50 | 46 @ 48 | 42 |
| Fine Delaine..... | 54 @ 56 | 52 @ 53 | 50 @ 52 | 50 |
| KENTUCKY AND INDIANA. (UNWASHED.) | | | | |
| $\frac{3}{8}$ Blood..... | 57 @ 58 | 56 @ 57 | 54 @ 56 | 49 |
| $\frac{1}{4}$ "..... | 53 @ 54 | 53 @ 54 | 51 @ 52 | 45 |
| Braid..... | 35 | 35 | 34 @ 35 | 36 |
| MISSOURI, IOWA AND ILLINOIS. (UNWASHED.) | | | | |
| $\frac{3}{8}$ Blood..... | 53 @ 55 | 51 @ 53 | 46 @ 48 | 46 |
| $\frac{1}{4}$ "..... | 49 @ 51 | 47 @ 48 | 45 @ 46 | 43 |
| Braid..... | 34 @ 35 | 34 @ 35 | 33 @ 34 | 35 |
| TEXAS. (SCOURD BASIS.) | | | | |
| 12 mos., fine and fine medium..... | 135 | 130 | 125 | 125 |
| Spring, fine and fine medium..... | 120 | 120 | 115 | 110 |
| Fall, fine and fine medium..... | 110 | 110 | 105 | 95 |
| CALIFORNIA. (SCOURD BASIS.) | | | | |
| 12 months, fine..... | 125 | 120 | 120 | 120 |
| Spring, fine..... | 115 | 110 | 110 | 100 |
| Fall, fine..... | 100 | 95 | 90 | 90 |
| TERRITORY WOOL: MONT., WYO., UTAH, IDA., OREGON, ETC. (SCOURD BASIS.) | | | | |
| Staple, fine and fine medium..... | 135 | 130 | 130 | 135 |
| Clothing, fine and fine medium..... | 130 | 120 @ 125 | 115 @ 120 | 125 |
| $\frac{1}{2}$ Blood..... | 125 | 120 | 115 | 120 |
| $\frac{3}{8}$ "..... | 110 | 105 | 105 | 95 |
| $\frac{1}{4}$ "..... | 85 | 85 | 80 | 80 |
| NEW MEXICO. (SCOURD BASIS.) | | | | |
| No. 1..... | 130 | 125 | 120 | 120 |
| No. 2..... | 90 | 90 | 95 | 110 |
| No. 3..... | 75 | 75 | 75 | 85 |
| GEORGIA AND SOUTHERN. (UNWASHED.) | | | | |
| | 45 @ 48 | 45 @ 48 | 43 @ 45 | 42 |

DOMESTIC WOOLS.

THE opening of the third quarter witnessed a quiet market, mid-year inventories occupying the attention of manufacturers. Wool merchants and manufacturers were awaiting with deep interest the outcome of the light weight openings. The business done by spinners and combers showed no material change either in volume or value.

The movement of wool in the far West as well as in the fleece sections, was marked by a spirit of waiting for better prices. The strength in the London sales helped to sustain values at the seaboard markets. Growers in the West, failing to find buyers willing to meet their views, consigned their wools in considerable volume to Boston and other wool selling centers.

The opening of light weights did not bring the hoped for encouragement to wool dealers, though what was lacking in the men's wear end of the business was partly compensated by the attention buyers gave to women's wear cloths.

During August fine wools were chiefly in favor. The steadiness of foreign wool markets was most helpful in preventing a general softening of values.

The quarter closed with a broader demand, manufacturers being much more in evidence. In a number of cases substantial purchases were made by careful buyers, who evidently believing that prices were not likely to be lower, and that if purchases were deferred too long, they would find the market on their particular class of wool more closely "sold up" than they had realized.

F. NATHANIEL PERKINS.

Boston, Mass.

October 8, 1923.

PULLED WOOLS. (W. A. BLANCHARD.)

| | 1923. | | | 1922. |
|------------------------|---------------|---------------|---------------|---------------|
| | July. | August. | September. | September. |
| | <i>Cents.</i> | <i>Cents.</i> | <i>Cents.</i> | <i>Cents.</i> |
| Extra, and Fine A..... | 115 @ 135 | 115 @ 130 | 115 @ 130 | 115 @ 125 |
| A Super..... | 100 @ 110 | 100 @ 110 | 100 @ 110 | 100 @ 110 |
| B Super..... | 80 @ 90 | 80 @ 90 | 85 @ 90 | 85 @ 90 |
| C Super..... | 55 @ 65 | 55 @ 65 | 55 @ 70 | 60 @ 70 |
| Fine Combing..... | 100 @ 110 | 100 @ 110 | 100 @ 110 | 100 @ 105 |
| Medium Combing..... | 85 @ 95 | 80 @ 90 | 80 @ 90 | 80 @ 85 |
| Low Combing..... | 65 @ 75 | 60 @ 70 | 60 @ 70 | 65 @ 75 |

PULLED WOOLS.

IN contrast to the inactivity and weakness which has characterized the market in general, pulled wools shown have maintained a fairly strong position. Owing to marked reduction in the number of lambs slaughtered,

the ewes being withheld for breeding, production fell off through the quarter. A quiet business through August was followed by large sales of B lambs in mid-September, one week's transaction covering 10,000 bags of this grade scoured at prices ranging from 83 to 87 cents.

The finer grades of old wools were in light supply, and, though in lesser demand than current pullings from lamb skins, have held fairly firm. No staple wools were made during the summer and the quotations given are estimated values.

W. A. BLANCHARD.

Boston, Mass.

October 1, 1923.

FOREIGN WOOLS—(BIGELOW, REED & CO., INC.)

Scoured Basis, 1923.

| | 1923. | | | 1922. |
|-------------------------------------|---------------|---------------|---------------|---------------|
| | July. | August. | September. | September. |
| Australian Combing: | <i>Cents.</i> | <i>Cents.</i> | <i>Cents.</i> | <i>Cents.</i> |
| Choice..... | 152 | 152 | 152 | 150 |
| Good..... | 143 | 143 | 143 | 131 |
| Average..... | 138 | 138 | 138 | 126 |
| Australian Clothing: | | | | |
| Choice..... | 152 | 152 | 155 | 150 |
| Good..... | 143 | 143 | 143 | 131 |
| Average..... | 138 | 138 | 138 | 126 |
| Sydney and Queensland: | | | | |
| Good Clothing..... | 143 | 143 | 143 | 131 |
| Good Combing..... | 143 | 143 | 143 | 131 |
| Australian Crossbred: | | | | |
| Choice..... | 65 @ 110 | 65 @ 110 | 65 @ 110 | 55 @ 95 |
| Average..... | 55 @ 95 | 55 @ 95 | 60 @ 100 | 52 @ 90 |
| Australian Lambs: | | | | |
| Choice..... | 140 | 140 | 140 | 150 |
| Good..... | 125 | 125 | 125 | 135 |
| Good Defective..... | 120 | 120 | 120 | 125 |
| Cape of Good Hope: | | | | |
| Choice..... | 145 | 145 | 145 | 140 |
| Average..... | 138 | 138 | 138 | 131 |
| Montevideo: | | | | |
| Choice..... | 140 | 140 | 140 | 131 |
| Average..... | 135 | 135 | 135 | 125 |
| Crossbred, Choice..... | 100 | 100 | 100 | 92 |
| English Wools: | | | | |
| Sussex Fleece..... | 102 | 105 | 107 | ..... |
| Shropshire Hogs (pick)..... | 95 | 97 | 98 | ..... |
| Yorkshire Hogs..... | 70 | 71 | 71 | ..... |
| Irish Selected Fleece..... | 64 | 65 | 65 | ..... |
| Carpet Wools: | | | | |
| Scotch Highland, White (in bond) .. | 30 | 29 | 29 | 23 @ 25 |
| East India, 1st White Joria..... | 63 | 63 | 63 | 55 @ 60 |
| East India, White Kandahar..... | 55 | 54 | 54 | 50 @ 52 |
| Donskoi, Washed, White..... | ..... | ..... | ..... | ..... |
| Aleppo, White..... | 41 | 39 | 41 | 35 @ 40 |
| China Ball, No. 1..... | 73 @ 76 | 73 @ 76 | 75 | 55 @ 63 |
| China No. 1, Sining (in bond)..... | 40 | 39 | 40 | ..... |

FOREIGN WOOLS.

THERE has been very little change in the market for foreign wools during the last quarter. The only advance was in low lustre wools, suitable for the astrachan trade.

Foreign markets have continued strong, chiefly due to Continental support on merino wools and English support on crossbreds.

Prices in the Boston market being relatively lower than foreign markets have induced the export of considerable weights of foreign wool held in bond.

There has been more demand for East India and China wools of the finer qualities. Other carpet wools are unchanged.

Supplies of foreign wools are limited.

BIGELOW, REED & Co., INC.

Boston, Mass.
October 5, 1923.

BOSTON RECEIPTS OF WOOL, FOREIGN AND DOMESTIC, BY MONTHS.

Compiled from figures reported by the Boston Chamber of Commerce.

| | Domestic. | | Foreign. | |
|---------------------------|---------------|----------------|---------------|----------------|
| | <i>Bales.</i> | <i>Pounds.</i> | <i>Bales.</i> | <i>Pounds.</i> |
| January, 1923..... | 28,218 | 6,726,900 | 67,273 | 39,066,000 |
| January, 1922..... | 68,968 | 13,824,500 | 23,522 | 13,060,500 |
| February, 1923..... | 21,260 | 5,989,900 | 92,147 | 40,885,000 |
| February, 1922..... | 64,211 | 13,407,300 | 21,424 | 11,838,800 |
| March, 1923..... | 36,880 | 9,337,200 | 99,529 | 55,200,000 |
| March, 1922..... | 43,371 | 10,899,100 | 49,352 | 29,046,600 |
| April, 1923..... | 33,189 | 7,109,200 | 92,425 | 45,476,900 |
| April, 1922..... | 36,293 | 9,654,500 | 56,677 | 24,538,700 |
| May, 1923..... | 41,972 | 10,586,400 | 89,384 | 42,769,900 |
| May, 1922..... | 66,453 | 16,717,400 | 52,016 | 24,255,000 |
| June, 1923..... | 88,534 | 22,144,300 | 57,357 | 22,258,800 |
| June, 1922..... | 101,082 | 29,277,900 | 17,603 | 7,377,600 |
| July, 1923..... | 88,606 | 26,080,600 | 18,857 | 7,762,000 |
| July, 1922..... | 137,864 | 40,560,800 | 65,554 | 30,791,400 |
| August, 1923..... | 64,576 | 17,680,200 | 8,935 | 3,444,900 |
| August, 1922..... | 77,563 | 21,809,255 | 48,117 | 20,825,540 |
| September, 1923..... | 39,211 | 10,433,600 | 9,586 | 3,473,200 |
| September, 1922..... | 33,846 | 8,593,800 | 25,332 | 12,709,700 |
| Since January 1, 1923.... | 442,446 | 116,088,300 | 535,493 | 260,363,700 |
| Since January 1, 1922.... | 638,651 | 164,744,555 | 359,597 | 174,443,840 |

COMPARATIVE STATEMENT OF IMPORTS AND EXPORTS OF
WOOL AND MANUFACTURES OF WOOL DURING THE
CALENDAR YEARS 1921 AND 1922.

FROM MONTHLY SUMMARY OF FOREIGN COMMERCE OF THE UNITED STATES
BUREAU OF FOREIGN AND DOMESTIC COMMERCE, WASHINGTON, D. C.

IMPORTS.

| ARTICLES AND COUNTRIES. | Quantities for Twelve Months ended December 31. | | Values for Twelve Months ended December 31. | |
|---|---|----------------|---|-----------------|
| | 1921. | 1922. | 1921. | 1922. |
| | <i>Pounds.</i> | <i>Pounds.</i> | <i>Dollars.</i> | <i>Dollars.</i> |
| WOOL, HAIR OF THE CAMEL, GOAT, ALPACA, AND OTHER LIKE ANI- MALS, AND MANUFACTURES OF: | | | | |
| UNMANUFACTURED— | | | | |
| Class I—Clothing: | | | | |
| Free..... | 195,247,783 | | 43,354,716 | |
| Dutiable..... | 12,618,832 | 38,401,590 | 2,417,609 | 9,471,786 |
| Total..... | 207,866,615 | 38,401,590 | 45,772,325 | 9,471,786 |
| Imported from— | | | | |
| United Kingdom..... | 21,406,205 | 7,383,794 | 6,920,578 | 2,410,262 |
| Canada..... | 3,088,555 | 3,363,950 | 744,506 | 795,756 |
| Argentina..... | 68,197,712 | 7,251,962 | 10,082,074 | 1,243,954 |
| Chile..... | 8,106,726 | 1,240,944 | 1,499,996 | 300,966 |
| Peru..... | 171,357 | 31,599 | 28,595 | 6,678 |
| Uruguay..... | 29,172,620 | 8,230,587 | 6,151,476 | 1,576,950 |
| China..... | 8,455,482 | 186,276 | 1,069,766 | 53,253 |
| Australia..... | 42,409,967 | 5,934,845 | 13,507,333 | 1,863,175 |
| New Zealand..... | 8,341,863 | 1,484,511 | 1,331,904 | 232,265 |
| British South Africa..... | 15,694,054 | 2,231,957 | 3,667,367 | 720,471 |
| Other countries..... | 2,822,074 | 1,061,165 | 768,730 | 268,056 |
| Class 2—Combing: (a) | | | | |
| Free..... | 10,057,843 | | 2,047,010 | |
| Dutiable..... | 779,978 | 155,101,038 | 155,071 | 44,357,492 |
| Total..... | 10,837,821 | 155,101,038 | 2,202,081 | 44,357,492 |
| Imported from— | | | | |
| United Kingdom..... | 2,481,132 | 25,164,951 | 569,541 | 7,894,744 |
| Canada..... | 114,502 | 4,175,792 | 27,056 | 1,172,782 |
| Argentina..... | 5,570,027 | 38,351,024 | 993,179 | 6,560,146 |
| Uruguay..... | | 22,536,675 | | 5,343,460 |
| Australia..... | | 42,685,627 | | 17,464,534 |
| New Zealand..... | | 9,285,923 | | 1,551,149 |
| British South Africa..... | | 7,034,623 | | 2,418,188 |
| Other countries..... | 2,672,160 | 5,866,423 | 612,305 | 1,952,489 |
| Hair of the Angora Goat, Alpaca and Other Like Animals (dutiable)..... | 4,060,819 | 15,850,924 | 1,008,106 | 11,930,298 |
| Angora (mohair) (dutiable)..... | | 23,742,649 | | 21,302,990 |
| Cashmere, Alpaca etc., (du- tiable)..... | | 2663,451 | | 224,429 |
| Total..... | 4,060,819 | 10,257,024 | 1,008,106 | 3,457,717 |
| Imported from— | | | | |
| United Kingdom..... | 2,234,309 | 4,327,957 | 480,466 | 1,367,348 |
| Peru..... | 628,471 | 240,775 | 192,798 | 67,461 |
| China..... | 200,098 | 238,024 | 94,747 | 101,659 |
| British South Africa..... | 726,632 | 3,456,169 | 189,417 | 1,385,333 |
| Other countries..... | 271,309 | 1,994,099 | 50,678 | 535,916 |

(a) Official figures now include under the term "Combing" many wools not within the definition of Class II wools contained in earlier tariff laws.

(1) Jan. 1 to Sept. 21 inclusive.

(2) Beginning Sept. 22.

COMPARATIVE STATEMENT OF IMPORTS AND EXPORTS
OF WOOL AND MANUFACTURES, ETC.IMPORTS—*Continued.*

| ARTICLES AND COUNTRIES. | Quantities for Twelve Months ended December 31. | | Values or Twelve Months ended December 31. | |
|---|---|----------------|--|-----------------|
| | 1921. | 1922. | 1921. | 1922. |
| WOOL, HAIR OF THE CAMEL, GOAT, ALPACA, AND OTHER LIKE ANIMALS, AND MANUFACTURES OF: | <i>Pounds.</i> | <i>Pounds.</i> | <i>Dollars.</i> | <i>Dollars.</i> |
| UNMANUFACTURED— | | | | |
| Class 3—Carpet: | | | | |
| Dutiable..... | | \$38,198,995 | | \$7,100,739 |
| Free..... | 97,900,496 | 134,836,838 | 11,499,175 | 22,166,395 |
| Total..... | 97,900,496 | 173,035,833 | 11,499,175 | 29,267,134 |
| Imported from— | | | | |
| Greece..... | 24,222 | 117,002 | 2,965 | 11,089 |
| Italy..... | 1,335,783 | 6,576,587 | 137,359 | 902,757 |
| Portugal..... | | 1,097,085 | | 82,953 |
| Spain..... | 200,737 | 491,445 | 20,247 | 71,932 |
| United Kingdom..... | 37,838,591 | 67,049,193 | 4,599,733 | 12,855,038 |
| Argentina..... | 10,181,420 | 10,320,381 | 1,142,541 | 1,529,752 |
| Chile..... | 85,750 | 25,275 | 12,877 | 2,534 |
| Uruguay..... | 2,351,805 | 781,711 | 449,740 | 103,738 |
| China..... | 37,182,717 | 61,533,467 | 4,099,893 | 9,131,364 |
| British India..... | 1,373,857 | 2,922,672 | 141,492 | 553,269 |
| Russia in Asia..... | 10,460 | | 2,034 | |
| British South Africa.. | 1,516,947 | 120,960 | 216,985 | 21,557 |
| Other countries..... | 5,798,207 | 22,000,055 | 673,309 | 4,001,151 |
| Total wool including mohair, etc., unmanufactured.... | 320,665,751 | 376,795,485 | 60,481,687 | 86,554,129 |

(2) Beginning Sept. 22.

COMPARATIVE STATEMENT OF IMPORTS AND EXPORTS OF
WOOL AND MANUFACTURES OF WOOL DURING
THE CALENDAR YEARS 1921 AND 1922.

IMPORTS.—*Continued.*

| ARTICLES AND COUNTRIES. | Quantities for Twelve Months ended December 31. | | Values for Twelve Months ended December 31. | |
|---|---|-------------------|---|-----------------|
| | 1921. | 1922. | 1921. | 1922. |
| | <i>Pounds.</i> | <i>Pounds.</i> | <i>Dollars.</i> | <i>Dollars.</i> |
| MANUFACTURES OF— | | | | |
| Wool and Hair, Advanced including Tops (dutiabie) | 15,038,617 | 4,707,892 | 9,878,400 | 3,292,197 |
| Yarns (dutiabie) | 5,843,634 | 3,604,194 | 6,952,638 | 4,393,661 |
| | <i>Sq. Yards.</i> | <i>Sq. Yards.</i> | | |
| Carpets and carpeting (dutiabie) | 1,410,127 | 11,453,494 | 7,739,374 | 17,819,430 |
| Oriental, Axminster, Savannerie, Aubosson, Oriental weave, and Chenille Axminster carpets and rugs (dutiabie) | | 2493,685 | | 22,502,497 |
| All other (dutiabie) | | 280,704 | | 2246,968 |
| Total | 1,410,217 | 2,027,883 | 7,739,374 | 10,568,895 |
| | <i>Pounds.</i> | <i>Pounds.</i> | | |
| CLOTHS (a): | | | | |
| Wool cloths and dress goods, (dutiabie) | 7,015,822 | 16,106,289 | 13,668,571 | 11,069,318 |
| Fabrics not weighing over 4 ounces per sq. yd. (dutiabie) | | 2220,924 | | 2424,893 |
| Fabrics weighing over 4 ounces per sq. yd., (dutiabie) | | 21,649,979 | | 23,208,720 |
| Narrow fabrics with fast edges and knit fabrics of wool, (dutiabie) | | 213,846 | | 233,916 |
| Cloth made of mohair, alpaca, etc., (dutiabie) | 396,734 | 1313,218 | 874,239 | 1595,677 |
| Mohair fabrics, woven or knit, (dutiabie) | | 270,383 | | 2147,134 |
| Total | 7,412,556 | 8,374,639 | 14,542,810 | 15,479,658 |
| Wearing apparel (dutiabie) | | | 6,304,614 | 17,568,675 |
| Knit goods: | | <i>Doz. Prs.</i> | | |
| Hosiery | | 2159,050 | | 21,108,705 |
| Gloves and mittens | | 228,268 | | 2108,041 |
| | | <i>Pounds.</i> | | |
| All other knit or crocheted | | 280,024 | | 2264,920 |
| All other wearing apparel | | 234,800 | | 924,799 |
| Total | | | 6,304,614 | 9,975,140 |

¹ January to September 21 inclusive. ² Beginning September 22.

(a) Pounds alone are reported, square yards not being given.

COMPARATIVE STATEMENT OF IMPORTS AND EXPORTS OF
WOOL AND MANUFACTURES OF WOOL DURING
THE CALENDAR YEARS 1921 AND 1922.IMPORTS.—*Continued.*

| ARTICLES AND COUNTRIES. | Quantities for Twelve Months ended December 31. | | Values for Twelve Months ended December 31. | |
|---|---|-------------------------|---|------------------------|
| | 1921. | 1922. | 1921. | 1922. |
| | <i>Pounds.</i> | <i>Pounds.</i> | <i>Dollars.</i> | <i>Dollars.</i> |
| All other manufactures of wool: | | | | |
| Free..... | | | 4,460 ^b | |
| Dutiable..... | | | 2,253,717 ^c | 2,453,921 |
| Total manufactures (d)..... | | | 47,676,013 | 46,163,472 |
| Total wool and manufactures of..... | | | 108,157,700 | 132,717,601 |
| Rags, noils, waste, and re-worked wools: | | | | |
| Free..... | 9,688,536 | ¹ 41,566,814 | 3,189,326 | ¹ 7,420,434 |
| Dutiable..... | 315,158 | ¹ 1,244,200 | 352,723 | ¹ 908,866 |
| Noils (dutiable)..... | | ² 6,014,771 | | ² 3,021,612 |
| Woolen rags, flocks and mungo (dutiable)..... | | ² 2,466,309 | | ² 506,027 |
| Waste (dutiable)..... | | 2,847,368 | | 1,323,587 |
| Total rags, noils, waste, etc..... | 10,003,694 | 54,139,462 | 3,542,049 | 13,180,526 |

(b) Press cloth of camel's hair for oil milling purposes. Free under Underwood-Simmons Law. In 1923 included in "All other manufactures of wool."

(c) Less "Other manufactures of hair" for nine months, or until the passage of the Tariff Law of 1922, since which time they have been included in "Manufactures of wool."

(d) Excludes all manufactures of hair and rags, noils and wastes.

¹ January to September 21 inclusive. ² Beginning September 22.

COMPARATIVE STATEMENT OF IMPORTS AND EXPORTS OF
WOOL, ETC.—*Continued.*

EXPORTS OF WOOL AND MANUFACTURES OF.

| FOREIGN. | | | | |
|---|-------------|-------------|-------------|-------------|
| ARTICLES. | 1921. | 1922. | 1921. | 1922. |
| | Quantities. | Quantities. | Values. | Values. |
| WOOL, HAIR OF THE CAMEL, GOAT, ALPACA, AND OTHER LIKE ANIMALS, AND MANUFACTURES OF: | | | | |
| UNMANUFACTURED— | | | | |
| Class 1—Clothing, lbs. | 1,465,877 | 1,374,932 | \$416,599 | \$282,704 |
| Class 2—Combing, " | 5,652 | 2,642,119 | 1,549 | 757,006 |
| Hair of the Angora goat, alpaca, and other like animals, lbs. | 52,341 | 199,955 | 13,938 | 36,397 |
| Class 3—Carpet, lbs. | 80,681 | 207,558 | 13,361 | 42,095 |
| Total unmanufactured. | 1,604,551 | 4,424,564 | \$445,447 | \$1,118,202 |
| MANUFACTURES OF— | | | | |
| Tops, lbs. | 55,004 | 66,262 | \$55,241 | \$66,041 |
| Carpets and carpeting— | | | | |
| Carpets and rugs woven whole, sq. yds. | 54,117 | 25,050 | 575,888 | 287,238 |
| All other, sq. yds. | 13,966 | 9,579 | 148,175 | 28,454 |
| Cloths: | | | | |
| Lbs. | 249,039 | 176,358 | 563,325 | 308,522 |
| Sq. yds. | 358,619 | 252,842 | | |
| Cloth made of the hair of the Angora goat, alpaca, etc., lbs. | 2,358 | 3,714 | 10,674 | 6,627 |
| Dress goods, women's and children's: | | | | |
| Lbs. | 27,838 | 3,748 | 52,536 | 5,795 |
| Sq. yds. | 68,025 | 6,046 | | |
| Wearing apparel. | | | 175,027 | 45,957 |
| Yarn, lbs. | 97,698 | 9,652 | 113,634 | 17,391 |
| All other articles. | | | 47,840 | 54,709 |
| Total manufactures of. | | | \$1,742,340 | \$820,734 |
| †Rags, noils, and other waste, lbs. | 248,559 | 155,541 | \$93,665 | \$52,354 |

† This is the first year this item has not been included among the manufactures of wool.

COMPARATIVE STATEMENT OF IMPORTS AND EXPORTS OF
WOOL, Etc.EXPORTS OF WOOL AND MANUFACTURES^a OF.—*Concluded.*

| DOMESTIC. | | | | |
|--------------------------------|-------------|-------------|-------------|------------|
| ARTICLES. | 1921. | 1922. | 1921. | 1922. |
| | Quantities. | Quantities. | Dollars. | Dollars. |
| WOOL AND MANUFACTURES OF: | | | | |
| Unmanufactured, lbs. | 1,927,174 | 453,278 | 527,701 | 104,593 |
| Manufactures of— | | | | |
| Cloths and dress goods: | | | | |
| Lbs. | 2,206,227 | 853,580 | } 4,040,988 | 1,676,302 |
| Yds. | 3,232,171 | 1,193,369 | | |
| Wearing apparel— | | | | |
| For women and boys. . . | | | 1,516,007 | 1,160,267 |
| For women and children | | | 1,780,483 | 1,089,081 |
| Knit goods. | | | | 388,355b |
| Wearing apparel: | | | | |
| Exported to— | | | | |
| France. | | | 156,697 | |
| Germany. | | | 167,966 | 50,966 |
| Greece. | | | 125 | 191,054 |
| Poland and Danzig. | | | 360,179 | |
| Australia. | | | 6,571 | 9,609 |
| Russia in Asia. | | | 30,199 | |
| United Kingdom. | | | 10,473 | 58,555 |
| Philippine Islands. | | | 11,898 | 38,688 |
| Japan. | | | 29,232 | 31,892 |
| Canada. | | | 1,498,522 | 1,076,532 |
| Newfoundland and Labra- | | | | |
| dor. | | | 35,545 | 94,631 |
| Mexico. | | | 722,534 | 565,046 |
| Cuba. | | | 78,451 | 229,293 |
| China. | | | 14,741 | 11,344 |
| Panama. | | | 15,009 | 9,448 |
| Dominican Republic. | | | 10,750 | 9,004 |
| Far Eastern Republic. | | | | 45,830 |
| Denmark. | | | 20,494 | |
| Bermuda. | | | | 15,543 |
| Esthonia. | | | | 24,688 |
| Peru. | | | 2,512 | 11,278 |
| British South Africa. | | | | 73,706 |
| Other countries. | | | 124,592 | 90,596 |
| Total wearing apparel. . . | | | 3,296,490 | 2,637,703 |
| Tops. | | 42,013 | | 26,796 |
| Yarns. | | 151,253 | | 293,577 |
| Carpets and rugs of wool. . . | | 85,379 | | 248,250 |
| All other manufactures of. . . | | 1,132,428 | 2,367,533 | 1,184,774 |
| Total manufactures of wool | | | 10,232,712c | 6,171,995c |
| †Wool rags, noils and waste: | | | | |
| Rags. | 1,863,073 | 4,850,925 | 197,836 | 412,034 |
| Noils. | | 151,737 | | 59,254 |
| Waste. | | 543,689 | | 70,505 |
| Totals. | 1,863,073 | 5,546,351 | 197,836 | 541,793 |

(a) Blankets which were formerly reported as a separate item are no longer so given.

(b) Knit goods reported in 1922 but not in previous years.

(c) Manufactures of hair n. e. s. not included.

† This is the first year these items have not been included among the manufactures of wool.

WOOL AND MANUFACTURES OF, REMAINING IN WAREHOUSE DECEMBER 31, 1921 AND 1922.

| ARTICLES. | 1921. | 1922. | 1921. | 1922. |
|---|-------------|-------------|-----------|------------|
| | Quantities. | Quantities. | Dollars. | Dollars. |
| WOOL, HAIR OF ANGORA GOAT, ALPACA AND OTHER LIKE ANIMALS AND MANUFACTURES OF: | | | | |
| Unmanufactured— | | | | |
| (a) Carpet wools (lbs.)..... | | 21,318,346 | | 3,866,848 |
| Clothing wool (lbs.)..... | 11,370,679 | 28,851,641 | 2,191,581 | 6,515,562 |
| Combing wool (lbs.)..... | 701,199 | 84,593,442 | 132,084 | 20,971,710 |
| Mungo, noils, shoddies, etc. (lbs.)..... | 31,632 | 4,312,497 | 30,525 | 1,740,279 |
| Hair of the Angora goat, alpaca, and other like animals (lbs.)..... | 1,152,706 | 4,060,369 | 308,597 | 1,294,194 |
| Total wool..... | 13,256,216 | 143,136,295 | 2,662,787 | 34,388,593 |
| Manufactures of— | | | | |
| Tops (lbs.)..... | 47,385 | 2,741,135 | 25,652 | 1,868,103 |
| Carpets and rugs, woven whole, sq. yds..... | 33,715 | 80,912 | 704,885 | 830,038 |
| Carpets and rugs, all other, sq. yds..... | 18,864 | 22,020 | 73,839 | 55,230 |
| Cloths— | | | | |
| (b) Worsted { Lbs..... 83,743 | | 296,174c | 210,180 | 488,194 |
| { Sq. Yds..... 147,695 | | | | |
| (b) Woolens { Lbs..... 120,848 | | 158,080 | 158,080 | |
| { Sq. Yds..... 208,897 | | | | |
| Cloths made of the hair of the Angora goat, alpaca, etc., (lbs.)..... | 97,337 | 71,537c | 153,325 | 63,283 |
| (b) Dress goods, women's and children's { Lbs..... 180,599 | | 315,366 | 315,366 | |
| { Sq. Yds..... 519,593 | | | | |
| Wearing apparel..... | | | 159,943 | 176,741 |
| Yarn (lbs.)..... | 980,473 | 80,396 | 1,057,323 | 91,915 |
| All other manufactures of..... | | | 358,807 | 132,002 |
| Total manufactures of..... | | | 3,217,400 | 3,705,506 |
| Total wool and manufactures of..... | | | 5,880,187 | 38,094,099 |

(a) Carpet wools free prior to September 22, 1922.

(b) Cloths—worsted, woolen and dress goods, etc. combined September 22, 1922.

(c) Pounds.—Square Yards not reported after September 21, 1922.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS
OF AUGUST 24, 1912.

Of Bulletin of the National Association of Wool Manufacturers, published quarterly, at Boston, Massachusetts, for October, 1923.

STATE OF MASSACHUSETTS } ss.
COUNTY OF SUFFOLK }

Before me, a notary public, in and for the state and county aforesaid, personally appeared Walter Humphreys, who, having been duly sworn according to law, deposes and says that he is the editor of the Bulletin of the National Association of Wool Manufacturers, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher, National Association of Wool Manufacturers, 50 State Street, Boston, Mass.

Editor, WALTER HUMPHREYS, Secretary, National Association of Wool Manufacturers.

Managing Editor, none.

Business Managers, none.

2. That the owners are:

The National Association of Wool Manufacturers, a voluntary association without capital stock, three principal officers being: *President*, John P. Wood, Philadelphia, Pa.; *Vice-Presidents*, William M. Wood, Boston, Mass.; George H. Hodgson, Cleveland, O.; Franklin W. Hobbs, Boston, Mass.; *Secretary and Treasurer*, Walter Humphreys, Boston, Mass.

3. There are no stockholders or bondholders, mortgagees or other security holders.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

(Signed) WALTER HUMPHREYS.

Sworn to and subscribed before me this twenty-fifth day of September, 1923.

(SEAL)

WILLIAM R. BURKE.

(My commission expires January 16, 1925)

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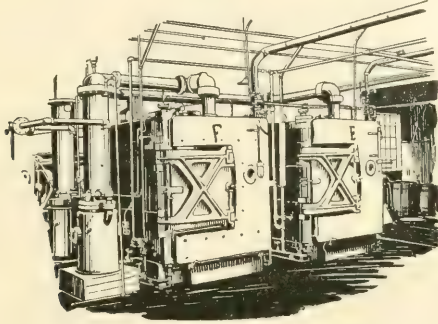
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